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SPECIAL REPORT

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COVER PHOTO BY ROBERT SEVERI

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WORLD WATCH

Act 2, SceneOne

BY JANET STILSON

I had to laugh when word surfaced a few months ago that Adam Singer is heading up the combined Flextech plc network group and British systems company Telewest Communications plc. Singer, who's been CEO of Flextech, certainly has not minced words in deriding the United Kingdom systems companies over the years for not understanding the programming business. Now we'll see if he has to eat his often-witty words.

However, last month, when I sat down with Flextech managing director Brent Harman, I started to get an idea about the "bridge" that's uniting programmers and operators like Flextech and Telewest.

In a sense, it all boils down to a buzzword I recently learned: COPE. That's actually an acronym that stands for Create Once, Play Everywhere — a way of summing up how content suppliers are attempting to create one idea or brand that can migrate over as many different platforms as possible.

Probably nowhere is COPE more in evidence than at Flextech. It's interesting, for example, to see how Flextech is exploiting its SceneOne idea in so many different ways. SceneOne itself isn't entirely new. It has been a Web site on British Sky Broadcasting plc's Open Shop bouquet for about 19 months, and it's largely a place to buy CDs, books, videos and tickets for concerts and other events. Its site is about to be re-versioned into an interactive-TV channel for a digital-cable platform. But viewers can also watch it as a traditional TV network. And SceneOne can also be used on Web-enabled phones.

SceneOne is a striking example of a new content paradigm that Flextech managing director Brent Harman calls "mega vertical."

SceneOne is a striking example of a new content paradigm for the industry that Harman calls "mega vertical." And Flextech intends to model other content plays in similar ways.

Among the endeavors with the greatest potential for the company is an upcoming health and medicine project that could "eventually totally change the health sector," Harman says. The venture aims to remove some of the steps that the average consumer has to cover in order to receive professional medical advice, and will eventually allow consumers to have one-on-one consultations with medical specialists over the Internet and/or television set. Key to Flextech's development of such COPE services is its merger with Telewest, according to Harman, because the operator is "introducing us to a whole inner circle on the technology side."

Indeed, if ever there was a time when programmers have a hunger for inside knowledge about technology, it's today. And conversely, it's safe to assume that very telephony-savvy U.K. cable operators are looking for the next "play," when so-called 2.5- and third-generation mobile phones become available, opening the door to more sophisticated interactive services. Content is obviously going to be key to that.

I certainly don't expect Singer's sharp tongue to be dulled in his new position. But the tech nerds and program geeks might find that "coping" with each other's existence is about to get a lot more interesting.

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BLIPS ON THE SCREEN

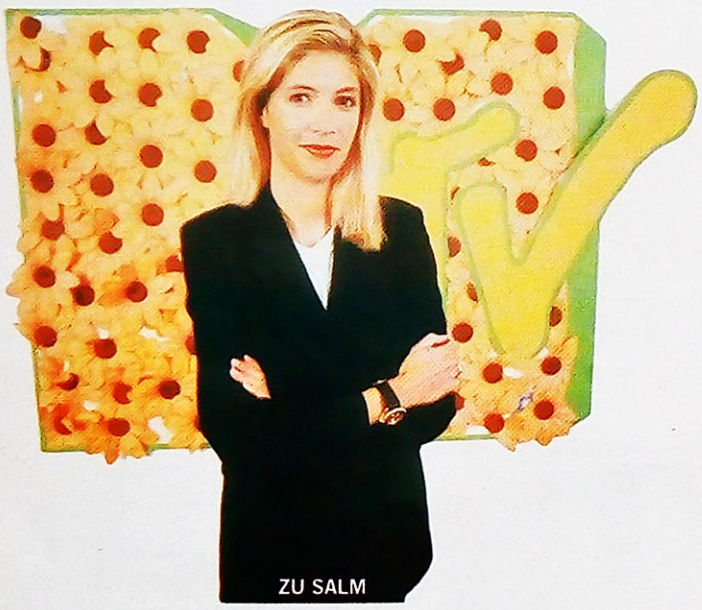
Princess With a Punch

MUNICH

BY DIETER BROCKMEYER

When Christiane zu Salm took the driver's seat at MTV's German operations a year and a half ago, critics were all too quick to predict her failure.

What did she think of the forecasted gloom and doom? "I expected it," says zu Salm, MTV Networks GmbH's general manager. "Being a 31-year-old, wedded princess and being blond, too, it was obvious that this would cause rumors." Indeed, she provided quite a package of clichés, among them her marriage to an offspring of Germany's ancient, noble zu Salm family.



ZU SALM

Underestimation has its virtues. "This was a good base to get started from," says zu Salm, who once headed kids' programming for Bertelsmann A.G.'s TV-production unit, Ufa, and who had also been in charge of merchandising and music production at Grundy/Ufa GmbH, a joint venture of Ufa and Britain's Pearson plc.

But the princess packs a punch. MTV appears to be on the verge of winning back the top-music-channel position in Germany, after years of falling behind its local challenger, VIVA. At least that's what MTV's own surveys indicate; neither it nor VIVA participate in the market's official TV research. "Christiane did quite well, bringing up last year's total revenues by 30 percent and advertising by 60 percent," says Brent Hansen, the London-based president of MTV Europe, to whom she reports.

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Mexico's Roving News Hounds

MEXICO CITY

BY JO DALLAS

As Mexicans prepare to go to the polls in July, the country's news organizations have been gearing up for one of the fiercest presidential battles in the country's recent history. And there's no shortage of politics dominating the pay TV news sector itself.

Stirring controversy were the decisions by some of the country's top journalists to switch corporate allegiance. More significantly, they defected to create Imagen Informativa, a news channel that is transmitted exclusively on direct-to-home (DTH) platform Sky Mexico. It is managed by Grupo Televisa S.A., Mexico's media giant that also invests in the panregional service Sky Latin America with partners News Corp., Liberty Media International Inc., and Brazil's Organizações Globo.

Launched this year, Imagen is Televisa's programming weapon of choice to reach an upscale audience. Company executives expect the channel to help Sky "achieve our target of 600,000 subscribers by year's end," Televisa pay TV president Jorge Alvarez Hoth said at a recent press conference. Getting there will require a dramatic increase of its customer base, which after three-and-a-half years in business stood at 380,000 in January, according to figures from programming sources.

Emilio Azcárraga Jean has made every effort to distance Televisa from partisan politics.

The shakeup began last December when three well known reporters — Pedro Ferriz de Con, Carmen Aristegui and Javier Solórzano — announced they were leaving Mexico's MVS Comunicaciones, owner of the country's largest wireless-cable operator, MVS Multivisión. For years, the trio had filled prime-time spots on MVS's news-focused radio station, Stereorey, and hosted popular programs on Multivisión's news-and-music channel Más. Adding salt to the wound was their defection to Multivisión's main pay TV competitor; in addition to Sky, Tele-

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Taipei may soon see some more shaking, this time in the cable industry.

Turbulence Anew In Taiwan

TAIPEI

BY VERONIQUE SAUNIER

Barely six months after Taiwan was rocked by one of its worst earthquakes, the country's cable industry was jostled by the March election of Chen Shui-bian, the first non-Nationalist president to be voted in after 50 years of Kuomintang Party (KMT) rule.

Analysts say the ascension of Chen, a former mayor of Taipei and a member of the Democratic Progressive Party (DPP), represents an economic, as well as political, shift. But at the same time, it's well known that the KMT has investments in a number of industries, including telecommunications and cable TV. And many fear the KMT's influence in business spheres may slow the pace of reforms proposed by the new government.

To be sure, the Chen administration has yet to be sworn in, so it's too early to speculate on the broader reforms it will institute. But in cable TV, at least, its mandate appears to be deregulation and transparency.

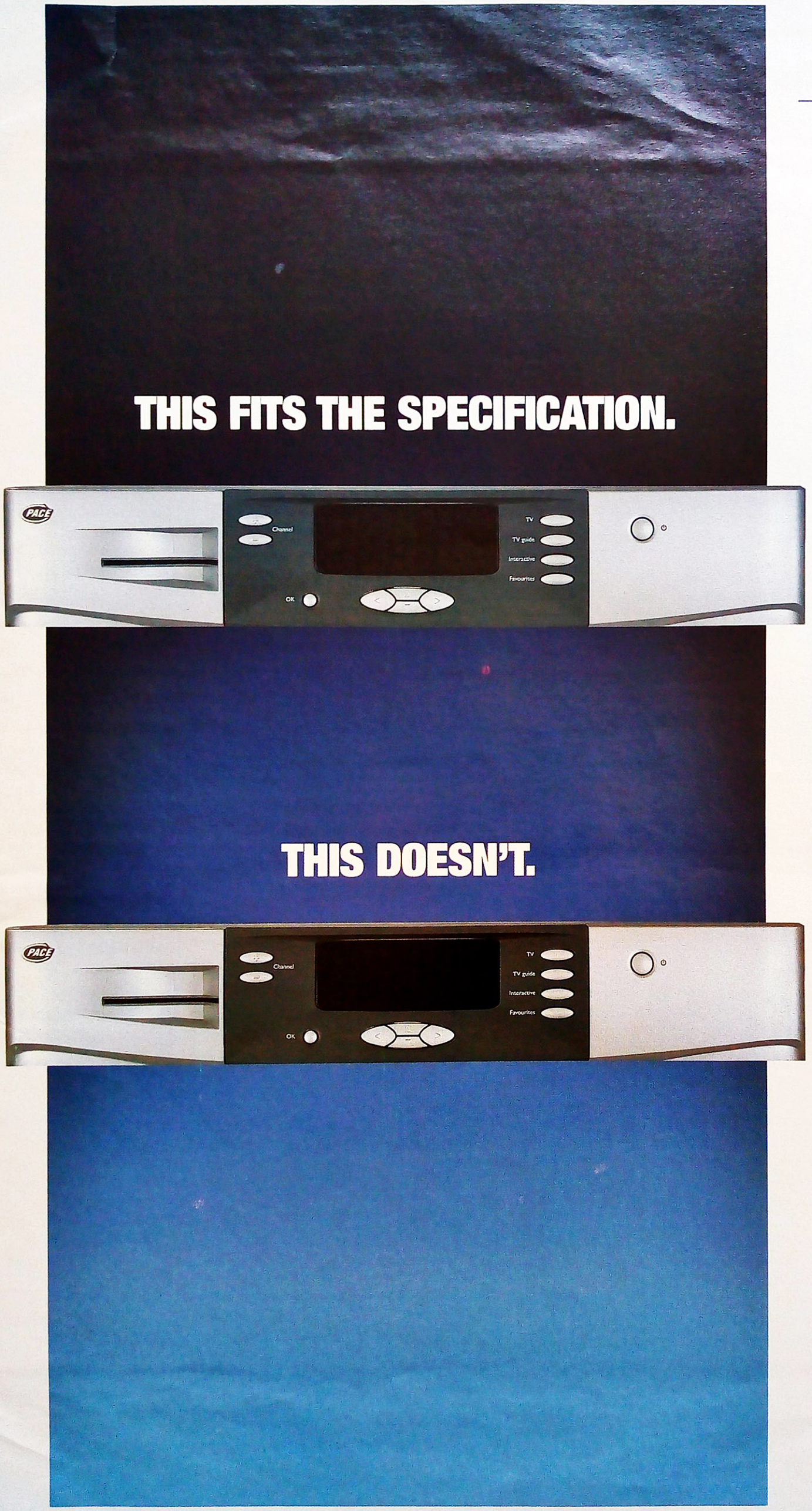
The first issue operators expect the Chen government to tackle is the former government's fee cap that limits the monthly subscription price of a 70 to 80 channel service to 600 Taiwanese dollars ($US13).

While the price ceiling benefits consumers, it squashes the profit margins of small operators. That's hindering the introduction of new services, such as cable modems and tiered programming lineups, which many view as necessary elements to take Taiwan's cable industry to the next level. What's more, the price ceiling deters overseas companies that might invest in the industry.

"There is no reason why, in a free market, the government should impose such a price control," says Simon Twiston Davies, president of regional trade group Cable and Satellite Broadcasting Association of Asia, or CASBAA. "International players would like to see a more even playing field and a more open market."

That said, the number of cable operators here continues to decline amid industry consolidation. Currently, Taiwan has about 70 systems, though the market is dominated by two major investors, the Rebar Eastern Multimedia Group and Koo's Group. Between them, they control more than 1.4 million subscribers and more than half of Taiwan's cable operators.

An expected loosening of cross-ownership restrictions on telephony and cable companies could help bring some new big names into the pay TV market, as could the forecasted easing of restrictions



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Universal McCann's Global Media Man

Sasa Savic and the rest of the McCann team have a unique global-buying strategy

BY JO DALLAS

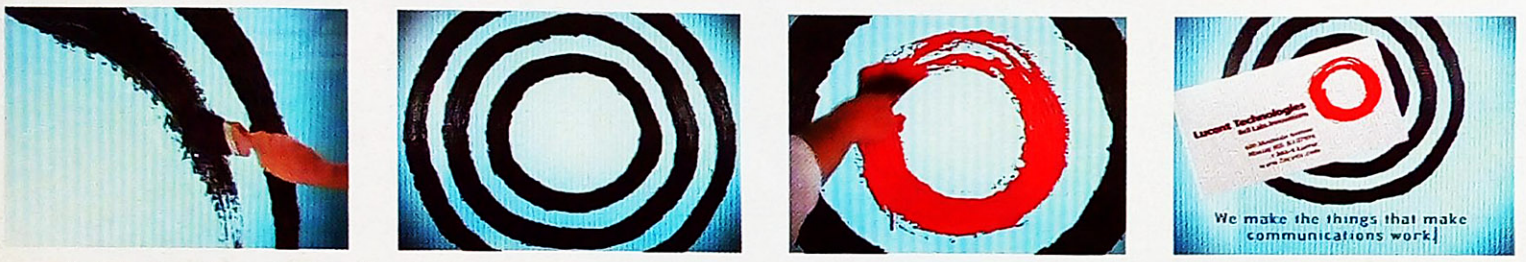
If there's anyone who's earned the globetrotting reference in his title, it's Sasa Savic, Universal McCann's vice president of international media. A native Bosnian, Savic, at 33, has worked both sides of the Atlantic, mostly in the Czech Republic and New York.

Travel may be *de rigueur* for any international ad executive laboring at a high-powered agency. But Savic's sojourns outside the United States have helped steep him in the kind of knowledge few can boast of having. That opinion comes from Dowie Jones, BBC World's international advertising account director with responsibility for the United States, Canada and Latin America. The London-based news network last year began carrying ads from McCann client Salomon Smith Barney Inc.

"Sasa has an exceptionally good knowledge of international media, while some ad guys couldn't tell you where Poland is on the map," says Jones, who adds that the internationalist attitude is reflected in the way McCann, unlike many agencies, has a dedicated team handling international media.

"When agencies get a global client, they'll generally give their European office a budget to work with, their Asian office a budget — hand over [responsibilities] to people that only make decisions on a regional basis," he says. "But McCann will happily execute a media buy in Europe and Asia from New York."

Savic joined McCann in 1993 as its media planner and buyer in Prague, Czech Republic, where he went from managing a handful of McCann clients to its entire medley of accounts. Today, he is the New York-based international media director for Coca-Cola Co. and other clients including Lucent Technologies Inc. and Hewlett-Packard Inc.'s Agilent Technologies Inc. unit.



Savic has served as a global-media guide for clients such as Lucent Technologies. Above, stills from Lucent's "Bull's Eye" corporate-branding TV campaign.

About a quarter of McCann's global clients use various forms of panregional advertising, including print, says Savic. Of the panregional budgets, 5 percent to 10 percent is spent on pay TV. The proliferation of different brands in different markets means that the "spray-and-pray" approach has natural limits. That's Savic's tongue-in-cheek way of describing the leap of faith advertisers are expected to take when buying panregional TV ads in the absence of data and audience-measurement tools.

What he believes will ultimately drive pay TV forward is the development of more dedicated feeds targeting specific markets. "Technology allows us to put together a complicated puzzle from one single point, so if I want to sell butter in China, for example, I can use a specific feed to get the kind of demographic I am looking for," he says. Dedicated feeds "give choice to global advertisers that need to customize locally. The next step is attracting local advertisers."

McCann elicits praise for its

Continued on Page 10

Expanding Korea's Cable Horizons

BY MICHAEL BAKER

When the sun fully rises on Korean cable TV, Esther Yang will be ready. Although the industry has been moribund since its birth in 1995, new regulations may trigger advertising-rate hikes at terrestrial-TV channels, making cable an attractive alternative for advertisers.

As media-planning director at Diamond Ad, Korea's second-largest advertising agency, Yang's importance to the domestic cable industry is likely to grow. She is already one of the major supporters of pay TV abroad. Clients like Hyundai Motor Co. and Kia Motors are big buyers of time on CNN International, ESPN International and Star Sports. In her experience, multichannel TV can better target an audience, and do so less expensively. But the difference between what Yang's clients spend on cable locally and internationally is stark. A heavy cable advertiser might spend just 10 million to 20 million won ($US9,000 to $US18,000) a month domestically. Overseas, half their budget usually goes toward cable buys.

That Korean scenario could change. The cost of terrestrial advertising time is expected to rise, because the government plans to license a second ad-rep firm that will compete with the Korea Broadcasting Advertising Corp. (Kobaco), a state monopoly left over from authoritarian days. In preparation, Kobaco is adopting a market-based pricing system to replace fixed pricing and limited buying options.

For now, Yang is circumspect about domestic cable's potential. "Just because [terrestrial becomes] more expensive, I don't think [advertisers] will go to cable. Cable penetration is nowhere near as [high] as terrestrial TV," she says. But "there will be budgets unspent. It will be one of the options."

"Before Korea had nationwide TV ratings, [Yang] was pushing for them."

— David Richardson, group director, Taylor Nelson Sofres Korea

Yang is drawing on her international background to help Korea adapt to a more global mindset. After five years at American agencies, including the Los Angeles branches of McCann-Erikson Inc., DMB&B Worldwide and Team One Advertising, she joined a small joint venture in Korea called Diamond-Bates Saatchi & Saatchi Korea in 1997. When the much larger Diamond Ad was bought by Cordiant Communications Group (the owner of Bates Worldwide) late last year, Yang transferred to her present position. Now she handles international and domestic media planning for Diamond's clients, including several big units of the giant conglomerate Hyundai and the Korea National Tourism Organization. Her list of multinational clients boasts the likes of Popeye's Chicken & Biscuits and Reebok International Ltd. She's also the highest-ranking woman at Diamond, a noteworthy feat in such a male-dominated society.

"She's quite strong willed, but she does things in a purely professional way … without ruffling many feathers. She doesn't dominate, but is quietly in control," says David Meredith, Bates' Tokyo-based regional managing director. Most importantly, "she brings a bicultural eye to everything. She knows what international clients expect, but

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Eyeing the Revenue Benchmarks

A comparison of cost-per-thousand (CPM) advertising rates around the world is examined in great detail within the pages of a thick report from Young & Rubicam Media's The Media Edge Europe division. And the accompanying chart represents just a fraction of what that study for 1998 and 1999 reveals.

For the most part, The Media Edge calculated its country averages using data from primary terrestrial television networks, only factoring in satellite-delivered channels where they have a substantial presence. So the information largely represents the hopes of and dreams of satellite-delivered channels as they seek parity with broadcasters.

As David Woolfson, senior vice president of global research at Turner Broadcasting System International Inc. notes, a report released last year by the Multichannel Advertising Bureau International determined that satellite-delivered channels garnered less than 1 percent of overall TV-advertising spending worldwide, or $US650 million of $US65 billion. And he notes in the most-advanced multichannel market, the United States, cable-delivered channels capture 50 percent of all viewing in prime time, but only 35 percent of prime-time ad revenue.

Peak-Time CPM Rates Around the World

	Adults	Young Adults
Western Europe	**10.03**	**N.A.**
Germany	9.72	130.57
U.K.	13.44	126.84
France	7.72	77.06
Italy	10.45	115.23
Spain	4.24	27.92
Netherlands	6.29	76.62
Switzerland	26.16	530.72
Sweden	16.52	124.53
Denmark	16.15	149.03
Norway	18.95	153.89
Finland	8.64	118.55
Belgium	9.75	108.35
Austria	15.27	247.64
Portugal	7.33	35.61
Greece	3.43	22.10
Ireland	6.74	41.82
Turkey	10.50	35.79
Central and Eastern Europe	**2.4**	**N.A.**
Russia	0.92	3.84
Poland	3.12	25.88
Czech Republic	3.99	32.01
Hungary	3.66	31.94
Slovenia	6.76	37.90
Romania	0.60	4.34
Slovakia	3.23	20.60
Bulgaria	0.70	5.14
Latvia	2.57	17.86
Lithuania	2.31	16.77
Croatia	0.54	N.A.
Yugoslavia	0.71	8.41
Middle East	**11.18**	**N.A.**
Israel	12.28	N.A.
Kuwait	15.76	N.A.
Saudi Arabia	4.20	N.A.
U.A.E.	9.12	N.A.
North America	**7.07**	**N.A.**
United States	6.92	71.17
Canada	10.79	N.A.
Latin America	**13.20**	**N.A.**
Brazil	19.92	112.48
Argentina	13.05	99.44
Mexico	9.71	37.79
Colombia	1.04	4.93
Venezuela	8.17	45.47
Peru	4.14	14.21
Chile	27.63	79.24
Guatemala	5.49	12.59
Uruguay	9.45	N.A.
Costa Rica	6.87	29.25
Panama	7.35	30.62
Ecuador	3.56	15.02
El Salvador	0.88	4.73
Australasia	**8.49**	**N.A.**
Australia	8.52	62.89
New Zealand	8.33	68.19
Asia	**3.76**	**N.A.**
Japan	7.23	51.21
Korea	5.30	18.81
Taiwan	2.42	12.76
China	0.71	5.83
Hong Kong	9.32	60.95
Indonesia	0.83	2.63
Thailand	1.14	4.02
Singapore	10.83	117.02
Philippines	1.26	4.29
Pakistan	0.18	0.47

NOTE: Adults include ages 15 and older. Young adults include 15- to 24-year olds.

Savic,

Continued from Page 8

ability to use its base of U.S. clients as pull to secure overseas accounts. "They do a good job of leveraging their work in the U.S. into Latin America," says David Byles, the president in that region of MindShare Inc., the media-planning shop of ad agency holding WPP Group plc.

SAVIC

But in the opinion of other rival ad-agency executives, who asked not to be named, that sometimes leads McCann to work in a formulaic, over-centralized way that stifles local creativity.

Yet "one-stop media shopping is the future," Savic maintains. Talking about the pending merger of America Online Inc. and Time Warner Inc., he comments: "It wasn't just about creating the biggest media company in the world. It's about offering a complete media package, the necessity of using TV and the Internet." ■

Korea,

Continued from Page 8

understands the sensitivities and practicalities of the local market."

David Richardson, group director of Taylor Nelson Sofres Korea, the local arm of market-research company TNS Media, adds some further perspective: "Before Korea had nationwide TV ratings, [Yang] was pushing for them. She would have found a way to get it done with or without an independent-research company."

She's still pushing. Yang says the ability of Korean cable networks to attract a larger share of her clients' budgets is dependent on obtaining better ratings research. A new TNS Media ratings service for Korean cable channels has too small a sample size to be accurate, according to Yang.

More cable channels ought to subscribe to the TNS Media service, Yang says, and use the data to promote themselves to advertisers. If they don't make that investment, and cable penetration doesn't rise past its present level of 10 percent, TNS won't have the incentive to improve its cable ratings and widen the sample base.

Right now, the cable channels' inferiority complex leads them to undervalue their own airtime and give advertisers as many as 10 free ad spots for each one they buy. That's not a good strategy, she emphasizes.

The new broadcast law should change some of that. When the details are finally hammered out by a new broadcast commission, it will likely allow companies, which were previously restricted to owning just one channel, to merge with or acquire other cable networks. This should improve efficiency by eliminating overlapping production infrastructures.

"There used to be a time when [advertisers] just threw their budgets at [TV]," but now they want to know the effectiveness of the ads.

Esther Yang, media-planning director, Diamond Ad

But even now, cable's advantages are clear to Yang. The main card is cost. While a 15-second spot on the prime time *Newsdesk* show — one of several top-rated programs on the state-owned terrestrial network MBC — costs 10 million won ($US9,000), that same amount buys hundreds of spots for a month, plus bonus time, on cable networks.

Another advantage is that cable ad buys don't go through Kobaco. Instead, companies buy directly from the channels. This is particularly comforting to multinational advertisers, says Yang.

Korean clients add another dynamic. In the post-economic crisis period, they're scrutinizing their ad spending more carefully. "There used to be a time when they just threw their budgets at it," but now they want to know the effectiveness of the ads, says Yang.

Yang is bent on educating others to provide clients with that knowledge. She hopes to train talented young Koreans with numbers and market savvy, and sales-pitch skills. "There are so few experienced [media] planners in the industry" because many go to Internet start-ups, she says. "I want them to see it as a creative, living, breathing industry." ■

Multichannel International
SPECIAL REPORT

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GROUND BREAKER AWARDS 2000

Defying The Odds

THERE ARE PEOPLE IN THIS WORLD WHO BALK AT THE ALL-TOO-COMMON SENTIMENT YOU JUST CAN T DO THAT. And in the process of proving the defeatists wrong, they manage to perform high-wire acts that change the paradigms, creating new opportunities and expectations for what can be achieved by an entire industry. It's with those people and companies in mind that *Multichannel News International* created its Ground Breaker awards two years ago.

The following stories about this year's winners explore not only their achievements, but the hard, some might say grueling, roads they've already traveled — and the substantial challenges they face moving forward.

The Ground Breaker awards are by no means a popularity contest, nor are they based on financial performance. Rather, they are the culmination of a long debate on the part of *MNI* editors over a series of months, after many long conversations with industry observers.

The award winners will be honored at *MNI*'s annual Summit 3 conference, held in conjunction with the United States' National Cable Television Association convention in New Orleans on May 7.

AWARD WINNERS

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GRAN PRIX

John Hendricks

The World to Come

WHEN JOHN HENDRICKS, A MAN FROM THE SEDATE FIELD OF EDUCATION, first incorporated a documentary cable channel back in 1982, the concept was considered a tad bizarre — and about as exciting as eating liver.

Make that ***pate de fois gras*** from a five-star restaurant on the French Riviera. Today, as founder, chairman and CEO of Discovery Communications Inc. (DCI), Hendricks' empire includes 15 different network brands, 10 of which are available outside the U.S. They cumulatively reach 403 million subscriber households, home to 1.2 billion people in 147 countries. Some 3,000 hours of original programming for those channels is currently in production.

Surveys routinely report that Discovery is one of the channels that subscribers value most. Among the most recent indications of the network's draw was the ratings coup for the ***Raising the Mammoth*** program, which scored an average 7.8 rating in the United States alone, besting the NBC broadcast network. A mammoth worldwide number was also achieved: 39 million viewers in its global debut. That achievement was quickly surpassed by the ***Walking With Dinosaurs*** special, with a more limited, U.S. debut. It shattered all previous records with an 8.0 rating.

The Discovery franchise has expanded into other ventures as well, such as Discovery.com Inc. — where Hendricks holds the separate titles of CEO and chairman — as well as a growing chain of retail stores.

But along with the successes for Hendricks, there have certainly been failures. And there's also the possibility of incursions on his networks' future popularity, as reality-based channels mushroom around the world.

Shortly before picking up his Gran Prix Ground Breaker award, Hendricks chatted with ***Multichannel News International*** editor Janet Stilson about his vision of the industry and of his own company in the years ahead. An edited transcript of that conversation follows.

MULTICHANNEL NEWS INTERNATIONAL: After the huge success of the *Mammoth* special, and then *Dinosaurs*, I'm wondering how high you think Discovery's ratings can go?

HENDRICKS: I suspect that we could see a 10 to 12 rating over the next two years. [With Mammoth,] we have witnessed now the power of global promotion around a single television event.

Judith McHale, [president and COO of DCI,] told me that there was nine-day ratings boost for Discovery [after Mammoth]. In other words, our ratings over the trailing nine days climbed above our average for a typical nine-day period.

So it makes me think, if we can get 24 great stories that we can tell each year, it'll not only produce wonderful ratings during the one- or two-hour event, but it can lift our entire average ratings.

MNI: I would assume that you risk the danger of taking the "special" quality out of specials if you do them too often.

HENDRICKS: Yes, it kind of loses its ability to be special. So I think right now, we'll ease into this. But the advertisers love it, because so many companies now are global, and to be able to be associated with a global television event is very appealing to them.

MNI: I sense that between you and your competition, there's a real land grab going on right now to come up with the next Titanic or Mammoth. It reminds me of stories I've read about explorers who go to all sorts of extremes to get to some find before their rivals.

HENDRICKS: (Laughs) That's the challenge. [The mega specials] have to grip people where there is some drama, making sure that we are telling a powerful story. And can we do 24 like that a year? I think we can. I think we probably start off trying to do one a month and migrate toward the one every two weeks.

MNI: When do you expect to start having that kind of frequency?

HENDRICKS: I'm hoping by the end of this year we might be on track to do that. Maybe by December, January.

MNI: You know, originally I was going to start out this interview pointing out that all of the new businesses you've created over the years have flowed directly from the Discovery brand; everything relates back to your original creation that was so completely new for the industry when it emerged — a real milestone. And then I was going to ask you if you're ever going to do anything that's entirely different — a new visionary concept completely unrelated to anything else. But I can't ask that now, because I remembered that you're creating a women's soccer league, of all things, which seems like an entirely new track for you. Do you see it that way?

HENDRICKS: Yes. That's a personal investment. That is not anything that has to do with Discovery. I was asked by the members of the U.S. World Cup champion team [to help establish the league]. It's been a dream of theirs to have a professional women's soccer league. I told them I would contact some of my acquaintances within the cable industry to see if they saw the value in that content franchise. The response was quite overwhelmingly positive. And so that led to the formation of WUSA [Women's United Soccer Association].

It's been fun. But you are right, it's a little bit of a departure.

MNI: Is there any connection at all to the Discovery channels?

HENDRICKS: Some of the national team

HENDRICKS

PHOTO BY ROBERT SEVERI

players — or the World Cup champions is a better way to refer to them — are actually participating in a new Discovery Health Channel series called *The Fit Team*. And *The Fit Team* is going to feature some of America's greatest athletes and what they have to tell us all about fitness, keeping in shape, nutrition, things like that.

MNI: So which came first, the program or the league?
HENDRICKS: Actually, it was kind of at the same time. I knew the players because of their interest in starting a league. And [Discovery Health president] John Ford and his team were looking for a fitness series, and I suggested to them maybe we could get some of the women soccer stars involved with that.

MNI: So if the soccer league is just a personal sidetrack, is it safe to assume that you don't have any desire at all to branch out into businesses unconnected to the Discovery brand?
HENDRICKS: I think that's so. Discovery is a very broad-brand term. That keeps me excited. There is so much business opportunity within the realm of Discovery. It is not limited to just history. It's not limited just to science. It gives us a lot of flexibility. So I think we have lots more to explore, just within our current brand.

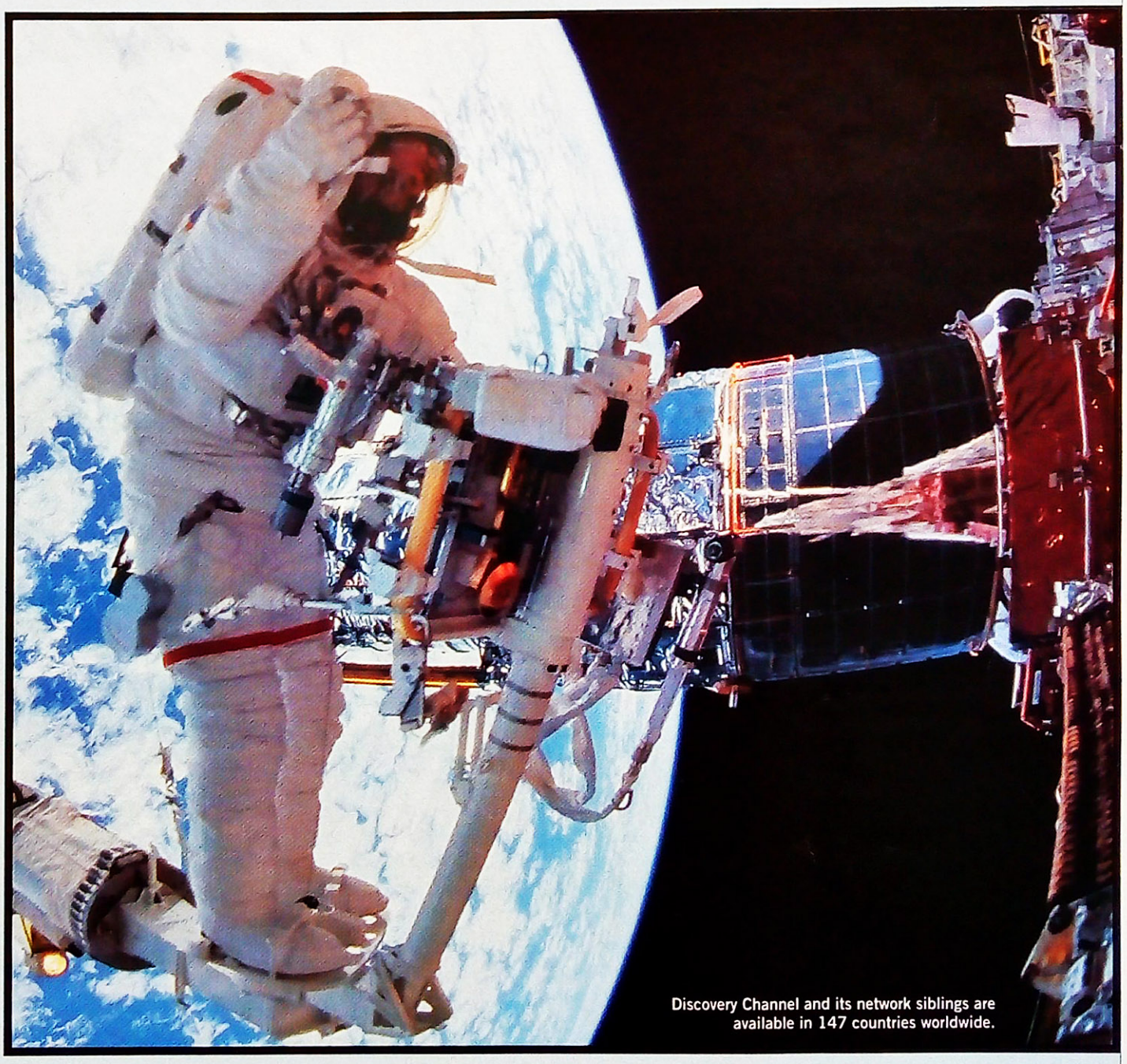
MNI: It's only natural that along with all your breakthroughs, there have been some ventures that haven't quite worked out. You recently closed down Discovery People and Knowledge TV, and before that Your Choice. And then there was the CD-Rom business and IMAX [large-format] theatrical pictures unit. Do you think you could have done things differently to make any of them succeed?
HENDRICKS: A couple of those are just [a matter of implementation]. We were convinced, and still are, that people want to be interactive with content. We just saw that hard-copy interactivity, meaning the CD-ROMs, was a very difficult business, and so we decided: Well, let's put our efforts into interactivity via the online world.

So that really wasn't so much a failure of the business. Rather than express [interactivity] through CD-ROMs, we express it now through the Internet. A lot of times, it's just picking the right technology to implement a business plan.

The same with the IMAX pictures. That was like: Well, do we take all the risk, or do we license our name to coproducers? Invest maybe a little bit, but let someone else take the risk? And in the end, we decided that people who are in the business of making IMAX films full time might be in a better position to develop a better business plan than us doing it as one of the multiple activities.

Your Choice TV was interesting in that — and we still believe this — people will pay to watch what they want to watch when they want to watch it. The tests were all very encouraging. But the problem was the rights. The more successful the test, the more the networks, like NBC, took the position: Well, wait a minute. Why do we have to work through a middle group, Your Choice TV? We'll just someday create the "Best of NBC," and they would get the shelf space.

All of that was then supplanted by a leapfrog in technology, which is the new personal digital-video recorder, like TiVO and Replay, that use digital technology. But you don't have to work through satellites, and you don't have the rights fees, because you're not doing anything with the signal.



Discovery Channel and its network siblings are available in 147 countries worldwide.

The consumer is actually in control of that video time shifting, and so we see the consumer being satisfied at getting what they want to watch, when they want to watch it, through this new generation of video-recording devices.

MNI: I understand Discovery has invested in TiVO, and you're on the board.
HENDRICKS: Yes, it's kind of funny that I think we recovered our entire investment in Your Choice TV in four days of stock trading on TiVO.

MNI: Are personal video recorders an interesting little step up for the industry, or a major milestone?
HENDRICKS: I see video storage at the set-top in quantities greater than 50 hours as a huge, huge step, because it finally puts consumers in control of what they see.

It has changed the fundamental [TV] usage of people who have the device — the way they watch TV. And so it has incredible implications. It has advertising implications because the device easily allows you just to skip through commercials.

MNI: Does that scare you?
HENDRICKS: Yes. And so what we are trying to do is [figure out] how we make the technology work for our advertisers. One of the things that we are looking at is overnight time. Set-top memory makes all those overnight programming hours all of a sudden valuable, because the device can capture a test drive of a new General Motors car that might be seven minutes in length, and that might be delivered along with a number of other infomercials.

So you are able to get a more in-depth experience with the things that you really are interested in buying. What we are trying to do is work within the technology for the benefit of our advertisers, because advertising revenue is close to 60 percent of all of our revenue at Discovery.

There are all kinds of questions with this. But I think it's such a powerful tool for the consumer. We are convinced in the long-term it's going to be a winning technology. The prices will plummet for this memory over time.

Right now the boxes are still pretty expensive — $US400 to $US500. But over time, I think you may see set-tops manufactured and the internal memory might cost only $US60, because the cable operator or the satellite provider has bought 4 million of them.

That's where I think we're going to see branding be so important.

MNI: Let's talk about revenues. Where

are Discovery Communications revenues now, and where will they be in a few years?
HENDRICKS: They won't let me project anymore, because we've got two big shareholders, Liberty [Media Corp.] and Cox [Communications Inc.] We had $US1.4 billion in revenues in 1999, and so that was huge for us. We are continuing to grow revenue at a healthy pace.

MNI: What about revenue from the international group?
HENDRICKS: It's $US243 million.

MNI: How do you expect the ratio between domestic and international to change?
HENDRICKS: We just can't project. We can give you the ratio today and say that it's dramatically increasing.

I was predicting three or four years ago that maybe near this time the revenues outside the United States might pass the U.S. revenues, but we've enjoyed a healthier growth domestically than I had thought possible.

MNI: Which international units are in the black now?
HENDRICKS: We are projecting that Discovery Asia may turn into the black this year. That's a real projection for us. Discovery Europe is there. So is Latin America.

MNI: So does that mean your entire international group is about to become profitable?
HENDRICKS: Not completely, because we've got India and other areas that don't fall within [those groups]. For instance, Discovery Germany and all the developing areas. Discovery Asia does not include Australia or India.
MNI: OK. So when will all the overseas units be in the black?
HENDRICKS: Well, it's hard to say. I think India will take maybe three more years. It's hard to speculate on the others. We have a longer appetite for the losses, because we know there is a long-term payoff here. So typically, when we start a business domestically, we look at probably 48 months, and we really want to expect in the U.S. that our venture is profitable by that time.

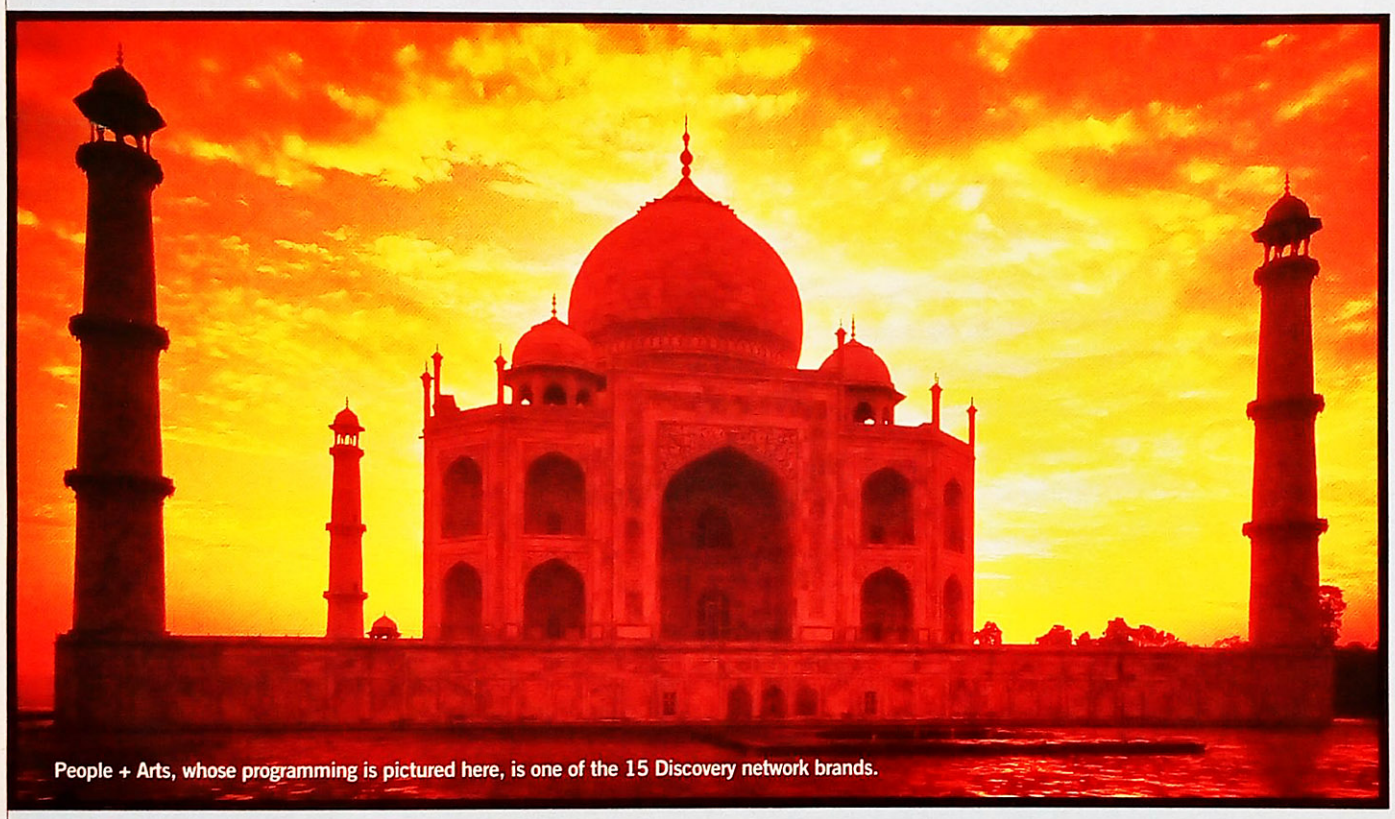
Internationally, we have a little more patience. So it's more like six, even as long as seven years, because we know that those are going to be hugely profitable for us long-term.

MNI: Let's look at the larger industry picture. How do you think TV usage will change in the coming years?
HENDRICKS: I think the television set will remain the great storytelling platform in homes worldwide. There are a lot of people who speculate that it will be very, very interactive, and there'll be a convergence [between computers and TV].

I think that the passive, linear experience is here to stay, because it's fundamental to what we are as humans. We love stories, because that's the way that genetically we have passed down information from one generation to another.

I don't think people will be cruising the Internet over their TV set. I think they'll use the Internet connection to check things that are their curiosity of the moment rather than to conduct in-depth research because you've got a health problem. We go to the PC for that.

We are trying to study this as best we can, but we don't see a massive convergence. We still see a personal device that helps you explore in depth all of the items that interest you, and we think the Internet with the PC is the best vehicle for that.


People + Arts, whose programming is pictured here, is one of the 15 Discovery network brands.

So you can imagine, then, a world where someone has 100 hours of available memory in their set-top, and we may be able to just push down eight hours of Discovery content that's available for them to watch at any time. And so we are investigating that.

Now the other area of focus with the company is the Internet. We think there's not a better brand than Discovery to help bring you the world of the World Wide Web.

And so, you've probably read about our expansion plans on the Internet. We have created a Discovery.com, which we are trying to design to be the very best Internet homepage, so that you're one click away from all the major areas that you typically use, whether it's checking your e-mail, going to Yahoo! for a search, or whatever.

MNI: I understand that you're considering an initial public offering for Discovery.com. And it's been said that one of the important elements for dot-coms to attract IPO investors is having a strong e-commerce element. I know you have your retail Discovery stores. But presumably, at least part of revenue from selling that merchandise on the dot-com will flow back to the retail unit. Is e-commerce going to be a big revenue stream for Discovery.com?
HENDRICKS: We think that we have a great story, should we pursue the public markets. Again, we're not to that point. We have already got a brand. We don't have to pay $US3 [million] or $US4 million for a set of Super Bowl ads to try to create a brand.

Globally now, if you total up all of the networks, all of the countries, we are really making over 400 million consumer connections that we can use to promote our services.

MNI: What do you see as the strongest revenue generator for Discovery.com?
HENDRICKS: Well, I think we see advertising. We are very good at advertising. And I think that's probably the largest segment short-term on Discovery.com. We dramatically increased the usage. Of the millions of sites out there, two years ago we were ranked something like 250th in actual usage. At the end of the last year, we had climbed up into the top 100. Last week, we made number 50, and we are setting our target to be one of the top 10 sites.

MNI: Discovery recently announced that two channels, Discovery Health and Discovery Travel & Adventure, would become global brands. Are there any other fledgling networks in your cluster that you see developing into brands that can go anywhere in the world?
HENDRICKS: Yes, I think Science has potential.

MNI: Of all the aspects of your business, what excites you the most?
HENDRICKS: I think I get the most excited when we have an annual event at Discovery. We call it the Discovery annual meeting. I think they call it D-Now, Discovery-Now. It's a day when we try to get almost all of our [top] employees together [from all over the world].

We used to do it in a small hotel room, and the last meeting was at the Baltimore Convention Center.

It's thrilling to me because we get to listen to all of our employees. They did video presentations from all of our offices around the world. And it was really thrilling.

So I get my biggest kick when I see all of our employees together and know that they feel the sense of pride in being able to work in a business enterprise that [makes] some positive contribution to societies around the world. ■

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GLOBAL PROGRAMMER

National Geographic Channels International

Speeding Up the Growth Curve

National Geographic Channel has slithered into 50 million homes with programming such as its *Explorer* series.

By Janet Stilson

Among the explorers who have unearthed alliances around the world for branded networks, it's hard to find anyone who can top the war stories of Sandy McGovern. Rolled onto a plane in a wheelchair in Johannesburg, South Africa due to a bad fall, food poisoning in Hong Kong, mugged in Lyon, France. Those are just a few bullet points on a long list of anecdotes that she can recount in her West Virginia drawl and from beneath a tassel blonde curls, and make it seem as if it's all one big adventure.

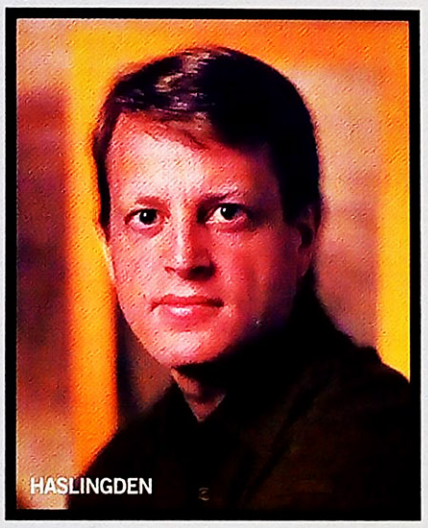
But for the networks for which she's been bruised and jet lagged over the years, none is probably better off for her efforts than National Geographic Channels International, for which she served as president until late last year. In two years, McGovern and her team grew the channel from ground zero to a whopping subscriber base of some 50 million households in 57 countries.

That's a "never-before-seen rate" of expansion for channels around the world, according to Peter Hamilton, whose Peter Hamilton Consultants keeps its binoculars focused on business-development issues for reality-based networks and produces the Web site documentarytelevision.com.

Finding major media players to grease the wheels of a company that had already earned a blue-chip reputation in the field of natural-history television and publishing was all part of the game plan for McGovern and her corporate ally, National Geographic Television president Tim Kelly. Another element was the very conspicuous decision when they started out in 1996 not to attempt a launch in the United States — the highly hazardous but deeply coveted market for many a network.

"I think that the job that Sandy McGovern did was really stunning," says the Aussie David Haslingden. The long-time News Corp. man was last seen at the Asian platform Star TV, where he was executive vice president, and before that was at the Sydney-based systems operator Foxtel. He was named CEO of National Geographic Channels International late last year, shortly after News Corp.'s Fox unit took a stake in the network group — and shortly before McGovern took off for her own entrepreneurial pursuits.

Now, Haslingden plans some stunning moves of his own. And both he and McGovern say there's a continental divide between their reigns, in terms of the channel group's circumstances and its



HASLINGDEN

mission moving forward.

A large portion of McGovern's key staff have moved on to different companies, with a healthy sprinkling of News Corp. veterans now pushing the channel group forward. There's a clear vision for launching National Geographic in the U.S. now. With that have come plans to build state-of-the art studio facilities in National Geographic's home town of Washington, D.C., and a more developed plan for creating a stable of digital channels.

"I inherited the company at a time when some critical things were happening that weren't options for Sandy," says Haslingden. The channel group "has a lot more things going for it than the business that Sandy was able to do so much with. It means I have a greater responsibility, because I have no excuses" for not succeeding.

He sees lots of areas around the world where Nat Geo needs to plant its flag. It's expected to launch shortly in Canada and recently had a soft launch on the News Corp.-backed Stream digital platform in Italy at the end of the first quarter. "During the last quarter of this year, we'll launch in Latin America, and with that in Spain and Portugal," Haslingden reports. "We're starting to work on France and Germany." He says his "internal target" for launches in those two markets — two of the most upscale in Europe — is the first quarter of next year. But while BSkyB holds a stake in Germany's Premiere World digital platform and is partially owned by French heavyweight Vivendi S.A., there's no deal yet for either country.

In tandem with the distribution plans for the Nat Geo channel are projects to spin off a series of digital channels, the details of which may emerge shortly. The seeds have already been planted in the United Kingdom, where National Geographic has launched a channel called Adventure One, which skews younger than Nat Geo and is more action oriented. "We're going to roll it out all over the world," says Haslingden.

Clearly, the country everyone is particularly keen on is the United States. And it is there where the Nat Geo channel will undoubtedly feel the full force of its main rival, Discovery Communications Inc.

It may appear that having powerful U.S. network owners would drive the Stateside distribution of the channel, but "I don't think being owned by Fox or NBC gives them any clout at all," says Fred Dressler, one of the most powerful U.S system executives that any channel

Continued on Page 45

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TECHNOLOGY

Le Groupe Vidéotron Ltée.

Proud Past, Uncertain Future

Vidéotron's headend control room

By James Careless

It could well be said that the battle brewing in Canada these days over the acquisition of Le Groupe Vidéotron Ltée. is a turf war in the truest sense of the term.

If the company that originally sealed a preliminary agreement in February to acquire Vidéotron, Rogers Communications Inc. of Toronto, actually succeeds in its bid, it will see its subscriber base swell to 3.7 million from 2.2 million, with a regional footprint covering Ontario and Quebec that would allow it to take on national telco Bell Canada. According to Toronto-based telecom analyst Ian Angus, who heads his own consulting group, Vidéotron's Quebec, "Territory is critical to this."

On the flip side, Rogers' challenger in the Vidéotron bidding battle, Quebecor Inc., a provincial media powerhouse, is known for its commitment to French-language culture — and the nationalist (that is, separatist) cause in Quebec. What's more, the Vidéotron shareholder that's backing Quebecor, Caisse de dépôt et placement du Québec, the country's biggest pension fund, apparently wasn't going to sit by and watch a jewel of Quebec's French culture be taken over by an English-Canadian monolith like Rogers.

Despite those territorial pursuits, the old real-estate maxim "location, location, location," doesn't exactly apply here. It's more like "location, location — and technology." At least that's the lure for Rogers, which lives and breathes the cable business on a more intimate level than its bidding rival.

"Vidéotron has generally done a better job of implementing and supporting high-speed Internet service than most other cable companies," says Angus. "I think Vidéotron is considerably ahead of Rogers in experimenting with and beginning to deploy [Internet-protocol] telecom services, to residential and small business."

In fact, Vidéotron is well ahead of most of the cable industry worldwide in testing IP telephony. It's been on the frontline of technology developments in many regards for quite some time.

To a large degree, Vidéotron is living proof of André Chagnon's commitment to the Quebec market and to offer it new services. The Vidéotron chairman built interactive services that were way ahead of their time. They include the analog Videoway service, which was launched commercially in 1989, when interactive TV and electronic messaging were virtually unheard of. The Videoway set-top box delivered two-way messaging, electronic games and the ability to choose from multiple camera views at a time when the Internet was just an anonymous military backbone, and VIC 20 computers were considered leading-edge technology.

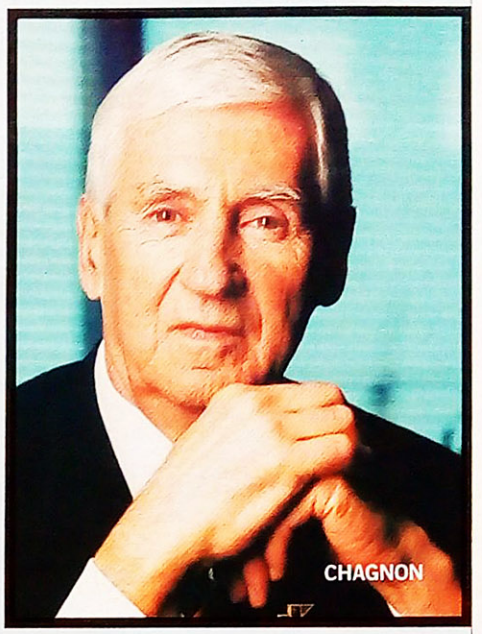
Even today, about 250,000 Vidéotron subscribers still use Videoway, while many of them also subscribe to the MSO's digital-cable services.

Much of Chagnon's innovation was driven by pragmatism, says Peter Lyman, a partner in the consulting firm PricewaterhouseCoopers. "The attraction of cable in the rest of Canada was U.S. border stations," he explains. However, since Quebec mainly speaks French, English-language U.S. channels weren't much of a draw for Chagnon's potential subscribers. "So he had to be much more creative" in convincing them to subscribe cable TV, by offering both interactive services and French-language programs imported from Europe, Lyman explains.

Guy Beauchamp, president and CEO of Vidéotron Communications — Videotron's cable-TV arm — agrees with Lyman's assessment. When it came to developing new services, says Beauchamp, Chagnon was just trying to make a living.

"I have this network," Beauchamp says by means of explaining his boss' perspective. "Surely I can develop a combination of products that will give a reason for each and every home to take at least one."

Of course, not all of Chagnon's innovations were winners. Take UBI, his proprietary successor to Videoway. Short for Universal, Bidirectional, Interactive, UBI was supposed to vastly expand Videoway's limited capabilities. But development problems delayed its launch in the early 1990s, and it ultimately killed by the unexpected rise of the Internet.



CHAGNON

Still, one failure wasn't enough to spook Chagnon, and today Vidéotron is at the forefront of IP-telephony research. In fact, the Quebec MSO is already supplying IP-telephone service to 200 Montreal test homes. It is about to expand that service to 2,000 homes, and plans to launch commercial service later this year.

That's the past and present of Vidéotron. Its future is anyone's guess. With about $US70 billion under management, the Caisse is more than a match for Rogers' president and CEO Ted Rogers. And that's especially true now that it has Quebecor as an ally.

Rogers refuses to comment on the whole issue. What had started as a strategic merger has become a political hot potato, with French-speaking Quebec nationalists supposedly standing up to the forces of English-speaking big business. Should Rogers start saying anything, it will only play into the hands of his enemies.

Whatever happens, the current brouhaha can't detract from Vidéotron's very significant contribution to cable-TV technology, and André Chagnon's rightful status as a true cable-TV pioneer. ■

YOU'VE GOT THE NETWORK

in Latin America

WE'VE GOT THE ADVERTISERS...

NATIONAL PROGRAMMER

Zee Telefilms Ltd.

Lofting Into a Higher Orbit

Zee shows, such as *Raahein*, reach 180 million viewers in Asia.

By Rashme Sehgal

There is a story frequently repeated in the corridors of Zee Telefilms Ltd. about the company's founder and chairman Subhash Chandra: When he first stepped into the entertainment business, it goes, Chandra wanted to know how a satellite functioned. The executive to whom this question was addressed replied by comparing a satellite to a flashlight. "If the flashlight is focused on the ground, it lights up a small area around it," the explanation went. "The higher it goes, the wider the area it lights up."

That was seven years ago. Today, Zee Telefilms has emerged as India's media powerhouse with transponders on satellites whose footprints cover the globe. This is from a man whose main focus, early on, was to bring entertainment to the doorstep of every Indian.

Today, the company has a market capitalization of $US10 billion, and its valuation could rise dramatically. Zee has 10 channels and its cable-systems company, Siticable, has 4.5 million customers. But within five years, the company expects to have 25 channels, cable operations serving 15 million households, and a satellite-telephony venture. The expansion will all be funded by an upcoming $US1.5 billion share sale in United States.

But it is just not the sheer strength and mass of the Zee properties that have helped it redefine entertainment in India. From the start, Zee aimed to spread its energies across different areas of the business. Chandra likens this diversification process to "developing different building blocks" that have now been consolidated under one head.

"This is why from 1993 onwards, I started Siticable and [education channel] Zee Attractive Learning Systems, and then began filling in the other gaps with telephony, radio, publishing and the Internet," Chandra recalls. "From the start, I was determined to become an integrated service provider, providing an entire gamut of services in the whole of South Asia.

"We are working toward achieving this objective. As far as I am concerned, every day is a new learning process for me," he adds.

His latest plan is to launch a $US755 million satellite-telephony venture called Agrani, which aims to provide service primarily to rural India. The satellites will also allow Chandra to beam his programs across the globe, while the "sat phones" will transmit Internet content and electronic-mail services.

He is also moving toward pay TV; currently, Zee Cinema is the only channel of the bunch that receives subscription revenue from cable operators. With the help of Canal Plus S.A.'s MediaHighway technology, his channels began "direct-to-operator" distribution last month. New digital set-top boxes will help operators implement a subscriber-management system that will enable them to charge customers for the channels they receive.

Chandra's $US296 million buyout of News Corp.'s stake in his TV network group, Asia Television Ltd. (ATL), is providing a major boost. The merger of ATL with Zee Multimedia Worldwide (which includes his African, British and United States channels) has helped pump up Zee Telefilm's revenue, which is expected to treble to 10.27 billion rupees or ($US236 million) by the end of this fiscal year. At the same time, profits are likely to more that double to 2.02 billion rupees ($US46.5 million), analysts estimate.

And because ATL is now a subsidiary of an Indian company, its own revenue horizons have been widened. Previously, government regulations restricted it to advertising deals with Indian firms that had export revenues, because all payments had to be made in U.S. dollars. By tapping the Indian market, Zee expects to pull in an additional 12 billion rupees ($US276 million) in ad revenue, according to a company source.

CHANDRA

One knowledgeable observer, Discovery India CEO Kiran Karnik, sees other changes at Zee as well. "Today, the group has consciously changed its strategy to come up with slicker and more interesting productions," he says.

Karnik adds that Zee's ultimate objective is to attract both upscale and lower-demographic groups with a spectrum of offerings. He says that the Music Asia channel is among those of interest to a more down-market audience, while the newly launched English-language channels cater to a higher strata of society. "They are using the same approach with their regional channels," Karnik adds.

Raj Kamal Singh, CEO of the flagship Zee Network service, elaborates further on the dual-demo marketing strategy. "We are offering multiple forms of content, not just to the metro viewers, but to small-city Indians," he says. "We are already entering the small towns of Almora and Sawai Mahopur with 10 channels and hope to extend these to 20."

The regional efforts are certainly present and accounted for at Zee News. The CEO of the channel, Deepak Shourie, says he believes its push into regional-news transmissions will be a major step forward in the company's efforts to go regional. "Today, people want to hear news in their own language. And the response to our Punjabi-, Marathi- and Bengali-language broadcasts has been very encouraging. No other private broadcaster [in India] has ventured into this field."

But for all the praise industry observers heap on Zee, they also see potential shadows up ahead. Karnik is among those who fear that once competition intensifies, Zee may protect the market position of its channels by blocking rivals from the Siticable systems, particularly in the most-prized channel slots. "We will have to wait and watch to see which channels they keep on the main spectrum," Karnik says.

The competition among all channels in India is indeed intensifying. Among the new entrants are the recently launched Sahara TV Hindi-language entertainment channel and Sony Entertainment Television's Max channel, which is also in Hindi. Planned channels from independent producers will only continue to heat up the competition.

There are other unknowns about Zee as well. Media critic Shailaja Bajpai asks, "Will Chandra be able to sustain himself in his bid to become a complete commu-

Continued on Page 47

Introducing a New Publication Focused on Advertising Sales.

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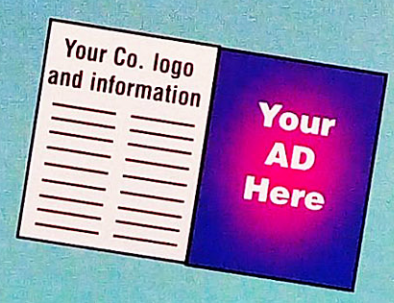

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ADVERTISING

Eddie Ruiz

Making Waves in the Latino Pond

By Jo Dallas

As president of The Weather Channel Latin America, Eddie Ruiz heads one of the region's last surviving standalone channels, something that's almost as rare as snow in Acapulco, seeing that most programmers today are hawking bundled packages of networks.

But being a small fish in a big pond hasn't stopped Ruiz from advancing the interests of panregional advertising for his own channel as well as for the industry as a whole. Boosting ad revenue is particularly important to a niche network like The Weather Channel, because it's still building up its limited distribution base, and can't rely on subscriber fees as much as other programmers can.

Ruiz can count two feathers in his sombrero on the advertising front. Many consider him a major inspiration behind the development of a landmark ad-verification technology called SoundTag. He also heads a network, with backing from its sister channel in the United States, that has solved the problem of how to transmit tailored advertisements over a single satellite feed to different markets. On that front, The Weather Channel is employing a technology dubbed Copy/Split.

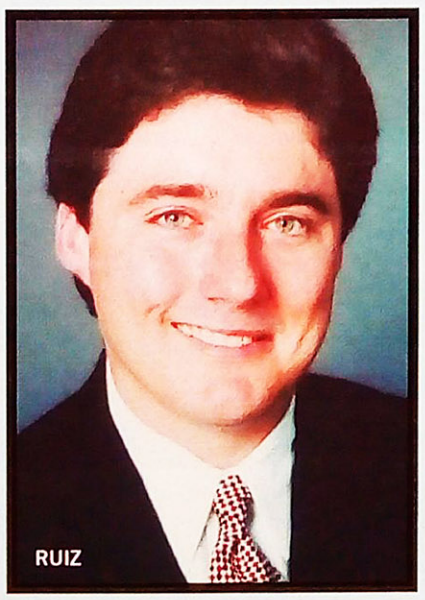
While most panregional networks in Latin America offer advertisers the option of using split feeds to transmit their adds to two or three areas of Latin America, Copy/Split allows for as many as 22 different target zones. That's a big advantage to an advertiser such as The Coca-Cola Co.; its Diet Coke beverage is known as such in many markets, but in others it's known as "Light."

Copy/Split even enables advertisers to target specific regions within certain countries, so, for example, a soft-drinks company could choose to advertise its products in different parts of Mexico only when temperatures start to soar.

Altruism is not the driving factor in all this, of course. The technology is patented for the exclusive use of The Weather Channel and its parent company, Landmark Communications Inc., which has pumped millions of dollars into the project. In fact, Copy/Split is a spin-off of groundbreaking technology developed to provide local weather reports — a programming imperative other networks do not have.

Nevertheless, the technology has already demonstrated its ability to persuade some advertisers to enter the Latin American multichannel market for the first time, so there's the potential of a spillover to other networks. A principle example is Ford Credit Latin America, which has to run different commercials in different countries. The one-commercial-fits-all approach is not an option. But neither can the company afford to ink dozens of separate media buys across the region, explains Ford Credit Latin America marketing manager David Perdo. He says The Weather Channel Latin America offers the convenience of one-stop shopping and the ability to traffic different ads from a central point to any combination of territories.

"What's so appealing is that I deal with only one network to handle an entire region, making it both time- and cost-effective," comments Perdo, adding that Copy/Split technology is what encouraged Ford to dip its toes into the Latino cable-advertising market in the first place. Technically, it has been "fantastic," he says. Even so, Ruiz notes that it took Copy/Split some time to get there. "It was two years late to market. But it had never been done before, and we had to get the bugs out," he says.


RUIZ

Though among the smaller of the panregional programmers, The Weather Channel Latin America has made an impact.

While that problem may be solved, there are plenty of challenges up ahead. Atop Ruiz's agenda is increasing the distribution of the network. While many of Latin America's panregional channels currently have about 10 million subscribers in the region, The Weather Channel has just over 5 million out of a total universe of some 15 million pay TV homes. As Ruiz points out, "We are not on all the region's cable systems yet, which puts limits on our ability to sell advertising, even with Copy/Split."

In many ways, Ruiz's career has always had an advertising bias. Before joining The Weather Channel, he was responsible for advertising and affiliate sales at the Latino women's network Gems Television. Even prior to moving into the region, he worked in cable ad sales in the U.S.

While Copy/Split is not available to other programmers, Ruiz has been able to demonstrate a measure of altruism and work for the greater good of the industry through SoundTag. A couple of years ago, Howard Glastone was working as a consultant to The Weather Channel, and the sticky issue of ad blocking by cable operators cropped up. It's a particular problem in Latin America, with some local operators deliberately cutting out the ads transmitted by panregional networks and inserting their own in order to earn some under-the-table advertising revenue. Gladstone, through his company, Gladstone Strategic Marketing, set up a partnership with the British technology firm Sipher plc. The solution they developed is based on inserting an audio code into the channel feed. That feed, in turn, is linked to a PC-based ground station that can automatically detect anomalies in any advertising schedule.

"There is no other system like it operating overseas," comments Connie Pettit, formerly the managing director of the Multichannel Advertising Bureau International and now senior vice president of Internet and print for @auction.com, an Internet media-buying company.

Industry executives have widely lauded SoundTag as a groundbreaking technology, set to clean up an ad-clearance problem that had threatened to derail the Latino advertising market. In this, Ruiz played a crucial role, says Glastone. "Eddie encouraged me to go forward with SoundTag, a technology he would not disproportionately benefit from. He showed real vision and leadership," he explains. Ruiz gave Glastone and his engineers a means to showcase his new technology with the Television Association of Programmers (TAP) Latin America trade group.

According to TAP chief operating officer Mary Pittelli, Ruiz was the one to say, "'We need to find a solution.' Eddie really pushed and pushed for SoundTag."

The Weather Channel Latin America was one of the first networks to test the new technology and open its doors to let networks and advertising agencies see the results for themselves.

According to one industry source, at the same time that SoundTag was being developed, a leading programmer in Latin America was working on a proprietary ad-verification technology of its own. SoundTag, in contrast, is well on the way to becoming a platform to which everyone has access. Small fish, it seems, can make very big waves. ■

Amsterdam trolleys are just one vehicle for the chello message.

MARKETING

chello broadband N.V.

Chello's Big Hello

By Mike Galetto

A few years ago, United Pan-Europe Communications N.V. CEO Mark Schneider approached a United States broadband-Internet-service provider (ISP) about forming a partnership with his company to attack the continent's then-barely-existent high-speed-access market.

With cable systems in some of Europe's key markets and the beginnings of an effort to consolidate its hodgepodge of ownership positions, UPC (then known as United Phillips Communications N.V.) would seem to have been an ideal candidate for an international expansion. The broadband ISP's response: No thanks.

Fast forward to today, and it looks like the snub was the best thing that could have happened to Schneider and UPC. Chello broadband N.V., the high-speed-access service UPC created on its own from scratch, boasts 171,000 customers in six countries just 13 months after its official launch. Late last year, chello was named Europe's best consumer Internet-service provider at the ISP '99 trade show, and this quarter it's set to sell shares in one of the region's most anticipated initial public offerings.

Behind the broadband ISP's numbers has been a widespread marketing campaign to get the chello brand and concept out there. And in many cases, chello wasn't only introducing itself to consumers, it was introducing the entire concept of high-speed Internet access. Rule No. 1: Keep it simple.

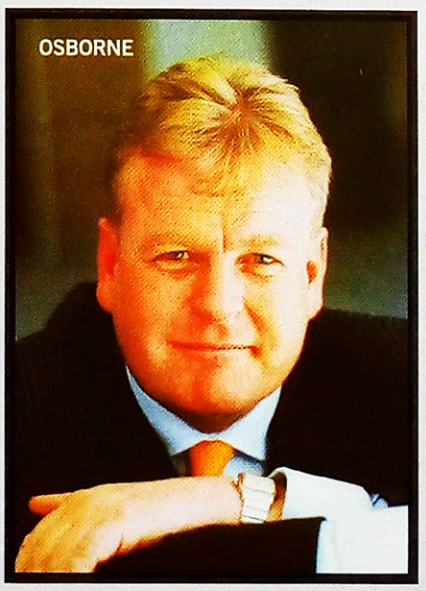
"It's kind of catchy: 'Hello, I'm chello,'" says Forrester Research B.V. telecom analyst Lars Godell, referring to the bite-size tagline the company's campaign has deployed into its markets. "They're really trying to market the chello brand; it's a really good idea to have a brand that can travel across Europe without language problems."

That cute mini-slogan has been one of the key elements in a charm offensive that's seen the chello name and logo plastered on everything from trolley cars to blimps to airport billboards, as the service pre-seeds territories prior to its commercial rollout. "The construct of 'chello' is the word 'hello,'" says chello managing director of marketing and communications Iain Osborne. "Chello represents the opening of a new form of communication, and I wanted it to seem as easy as starting a conversation." Even in countries where the local language is preferred, "hello" is part of the come-on. In France, for example, it's "Hello, *je suis chello*."

Chello shifted into a higher gear in March amid its push into its first non-European markets, Australia and Latin America, with an agreement to sponsor the Arrows Formula One auto-racing team. The first competition for the chello-sponsored racecar was in, opportunistically enough, Australia, where chello is distributed over the wireless-cable network of Austar United Communications Ltd., majority owned by UPC parent UnitedGlobalCom Inc. Tests to deliver chello over its satellite service are underway.

The sponsorship "has a nice overlap with our target niche. It's high speed, high tech and innovative," says chello president and CEO Roger Lynch, who appears to share the mindset of America Online Inc. chairman and CEO Steve Case in developing a "chello-anywhere," multi-platform strategy.

"It's all about building curiosity. We had 25 percent brand awareness in Amsterdam even before we launched the service," notes Osborne, who joined the company from Yahoo! Inc.'s European unit. "We take a very intense local approach to our marketing; we come from


OSBORNE

the ground up rather than from the sky down. The chello message is: It's for everyone."

That means chello marketing has had to be just as educational and informational as it is entertaining. But it doesn't mean there are separate means to those ends. Last October and November, for example, chello's "broadband bus," a 1960s American school bus decked out in the chello colors, toured six markets spreading the company name and broadband-Internet gospel. On board were four workstations that gave "passengers" a taste of what the service is all about.

"They've kind of gone for the MTV feel: aggressive, bubbly and colorful," says John Brian, the executive director of business development at interactive-TV software maker Open TV Corp. "They defined a space in the marketplace and aggressively went after it."

That energy won't likely die out too soon, amid ever-growing competition in Europe's dial-up Internet access market. "There's a massive wave of free-access providers" that could inhibit the growth of paid broadband-Internet services, notes Noah Yasskin, a European Internet analyst with market-research firm Jupiter Communications Inc.

In many markets, free access has drawn a lot newbies onto the Internet. But as Osborne sees it, they're just as much a target for chello as the most intense Webheads. "We don't want just the early-adopter market," he says. In part, that's why chello's marketing highlights its unique capabilities: high-speed access, an "always-on" connection and a flat monthly fee that averages $US40 a month. The flat fee is particularly important, because local calls in Europe, as well as in many other regions, are metered. Many analysts cite that as one of the reasons Internet use is lower in Europe than it is in the U.S.

To be sure, it won't be long before chello has to pick on someone its own size, namely digital subscriber line (DSL) service from the local telephone companies.

"The national telcos will have more DSL customers," than broadband-cable Internet services, predicts Forrester's Godell, who notes their wider networks — and wider potential markets — as a critical advantage. His assertion is backed up by a number of industry forecasts, including one from Britain's Ovum Ltd. that says on a global level DSL will have almost three times as many customers as broadband cable in 2005.

Continued on Page 47

OPERATIONS

British Sky Broadcasting:

The Mother of Reinvention

Sky Digital, above, transmits more than 200 networks to its subscribers.

By Chris Forrester

In this day and age, when British Sky Broadcasting Group plc is abuzz with new projects and bent on reinventing itself as a company that goes far beyond plain-old pay television, it's easy to lose track of how far it has come.

Flash back to November 1990. That marked the end of a bloody battle between two direct-to-home (DTH) competitors in England, with News International plc-controlled Sky Television and Pearson plc and Granada Group plc-led British Satellite Broadcasting (BSB) agreeing to merge and be known as British Sky Broadcasting (BSkyB). At that time, Sky TV was reportedly hemorrhaging about £2 million ($US3.9 million) a week, and BSB was apparently losing even more.

BSkyB still carries a heavy debt load. It posted net losses of more than £832.2 million ($US1.3 billion) for the six months ended Dec. 31. But skip last decade — past the battles with rivals and regulators concerning its gatekeeper role in programming, past the struggle to move beyond British soil, and past its introduction of digital transmissions — and consider that today, the company is significantly outperforming previous market forecasts.

Jonathan Davis, a senior consultant at London Economics, says not only has BSkyB been a key driver of pay television in the United Kingdom, "but it provides a measuring stick for companies around the world when it comes to digital deployment and the sheer quantity and sophistication of its services."

There's little wonder that another industry insider says "Sky is working like a well-oiled machine — complex, but delivering high-performance results across the board."

That may be so. But BSkyB CEO Tony Ball sounds a little bit like Frank Sinatra singing *The Best is Yet to Come*, as he details how he's transforming the company. Ball contends that BSkyB is no longer a TV firm. "In every sense, we are a new-media company, and have been so since before the term was coined," he says.

The importance of that attitude — and the new projects it is inspiring — can't be underestimated. Ball says he is determined to see "plenty of blue water between us and our competitors." But those foes will certainly give BSkyB a run for its money.

BSkyB racked up some 4 million direct-to-home customers by last January, more than 2.6 million of which are buying its digital service. Still, Britain's two dominant cable operators, NTL Inc. and Telewest Communications plc., as well as digital-terrestrial outfit ONdigital, expect to collectively garner about 1.5 million digital subscribers by the end of this year. Right now, BSkyB is working with a total customer base of more than 8.6 million homes.

The three competing pay TV operators depend heavily on BSkyB's programming diet of movies, sports and mainstream entertainment, and that's especially so in the premium-channel category.

But while BSkyB retains its programming clout, its grip might loosen before too long. There are almost daily reports of NTL strengthening its own premium-channel offerings, with additional speculation that ONdigital has its own programming visions.

Additionally Telewest's recent acquisition of Flextech plc — without doubt BSkyB's main U.K. rival in channel creation — could easily lead to more direct challenges to BSkyB's current programming dominance.

The Telewest-Flextech merger, it's worth noting, was definitely helped along because they both have a common shareholder in Liberty Media International Inc.

There is no doubt that with the changing scenario at least partially in mind, BSkyB is moving much deeper into dot-com enterprises as well as other forms of interactive content. That focus inspired the recent creation of a new unit called Sky New Media Ventures, bankrolled to the tune of £250 million ($US406 million).

Among the upcoming projects is an interactive version of Sky News, debuting next month. Viewers will be able to choose the running order of a newscast while viewing the live transmission in one corner of the set. Other options include offering live, breaking-news as permanent picture-in-picture options during a normal newscast.

That project is very much in sync with BSkyB's established interactive coverage on Sky Sports. It allows viewers to select their own camera angles as they watch live sporting events, while also providing instant replays and match highlights. Such services might be considered fancy gimmicks by some, but according to Ball, "more than 40 percent of Sky Digital viewers watch their live sport through Sky Interactive."

Clearly, new technology is part of the plan. Besides signing a Britain-exclusive deal with TiVo Inc. to create a Sky-branded personal digital-video recorder, BSkyB later this year is expected to bring to market second-generation digital set-top boxes with 20 hours of onboard recording capacity and the prospect of facilitating highly-targeted advertising.

Meanwhile, the creation of more traditional forms of programming is in evidence at the BSkyB general-interest flagship channel Sky One, which in the past has introduced to British viewers such American imports as *X-Files*, *Friends* and *West Wing*.

According to Sky One's newly appointed general manager David Bergg, Sky One has "fantastic ambitions." He explains that although acquisitions — the vast portion of his schedule — will remain important, "we aim to continue the process of commissioning more material by volume and value."

Already on the air, and fast developing a cult status in Britain, is the dramatic comedy *The Strangerers*. And coming shortly is a 26-week run for a new sitcom from British stand-up comedian David Baddiel. While agreeing that every project has to be assessed on its merits, Bergg is nevertheless looking "for a higher percentage of first-run, commissioned product to run in peak time."

Bergg reports to BSkyB managing director of content Elisabeth Murdoch, who has succeeded in moving the company into some high-profile, "smart-and-serious" film projects, like *Saving Grace*. It's a comedy starring British actress Brenda Blethyn, who plays a widow that pays off her late husband's

debts by cheekily growing marijuana. That film won the important Audience Award at the Sundance Film Festival earlier this year.

It will take a year or two to see whether these Home Box Office-like projects register in the ratings, but *Saving Grace* is just one of about nine films from the Sky Pictures unit, which is playing with a budget of just $US25 million.

BSkyB is embracing other challenges, not the least of which is its role in turning around Germany's so-far lackluster pay TV market. BSkyB paid $US1.44 billion for a 24 percent stake in the KirchPayTV GmbH digital platform, which goes by the brand

BALL

name Premiere World.

The deal required four months of regulatory examination and was approved with the proviso that the companies not engage in the joint acquisition of movies or sports rights. Morgan Stanley Dean Witter & Co. senior analyst Rebecca Winnington-Ingram says the approval represented the jumping of a major hurdle.

Now, BSkyB and its partner, Premiere parent the Kirch Group, must make the German scheme work, with the key rationale being "the huge underdeveloped market," Winnington-Ingram says.

Pay TV penetration in Germany, she adds, stands at just 6 percent, though many bet that BSkyB's know how will help drive that number northward.

Securities analysts like Winnington-Ingram have been surprised at times to see BSkyB outperform their expectations. Industry forecasts certainly appear to fall short of what BSkyB says is in its range of vision.

Take this forecast from investment bankers ABN-Amro, made in June 1999: "For June 2003 we now forecast 5.1 million [analog and digital direct-to-home satellite] subscribers." Today, BSkyB is zipping along so quickly that the platform expects to register 5 million DTH subscribers by June 2001. That growth is reflected in its stock price, which has almost tripled since Ball left his job running Fox/Liberty Networks Inc. back in June 1999 to head BSkyB.

Sure other television — er, new-media — competitors will try to put a dent in BSkyB's future growth.

But at the same time, Sky Digital now includes more than 200 networks, many of which are at least partially owned by rivals. There are channels from Flextech, Discovery Communications Inc., Turner Broadcasting Inc., Viacom Inc., the major public-broadcaster terrestrials, plus a cluster of independent channels. The pack also includes a 10-channel Asian bundle, through which players such as India's Zee Telefilms Ltd. are helping to bring some hard-to-reach minority audiences into the BSkyB orbit.

While Britain's cable and DTT operators may aim to poke a hole in BSkyB's rising balloon, it's clear that the company is taking the whole industry along for the ride as well. ■

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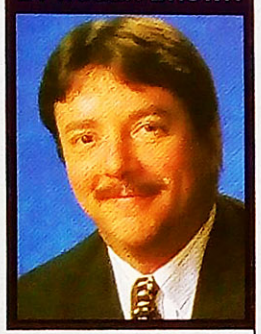
Big in Japan

The long-floundering Japanese cable-television industry is poised for radical and profound change as that country's two largest cable operators prepare to become one.

As widely reported last month, Microsoft Corp. purchased MediaOne International's stake in Japan's Titus Communications Corp., Japan's No. 2 multiple system operator, and almost immediately afterward began merger talks with Jupiter Telecommunications Co. Ltd., the country's biggest cable operator with about 600,000 subscribers. It's part owned by owned by AT&T Corp.'s Liberty Media International Inc. Industry analysts speculate that the two companies could complete a merger by this summer.

BY ROGER BROWN



IN SYNC

If the two operators come together, they will jointly control 690,000 cable subscribers. More importantly, they'll have access to 7.5 million homes, to which they can market a variety of new services, from digital TV to high-speed Internet access and cable telephony.

Microsoft's purchase of MediaOne's share of Titus gives it control of 60 percent of that company, in which Japanese giants Itochu Corp. and Toshiba Corp. will remain as minority stakeholders. Liberty, meanwhile, owns 40 percent of Jupiter, partnered with Sumitomo Corp. According to press reports, Liberty may up its stake to 50 percent.

The brains and motivators behind the new alliance are, of course, Microsoft chairman Bill Gates and Liberty Media Group chairman John Malone, two high-powered entrepreneurs who understand the power of broadband networks and the services they can deliver to consumers and businesses. The two became acquainted during Malone's tenure as CEO of Tele-Communications Inc., the largest cable operator in the United States that was acquired by AT&T.

In the immediate term, a merged Jupiter and Titus would be controlled by Liberty and Sumitomo and have just 28 cable systems, a tiny fraction of the more than 700 licenses that exist in Japan. It is this market fragmentation that many observers say has contributed to Japan's low cable penetration rate of roughly 15 percent; few of the license holders have the economic wherewithal to upgrade their analog, one-way systems to digital, interactive networks. Gates and Malone have the ability to change that situation.

Malone and others, including Liberty Media International president Miranda Curtis, have high hopes for Japan's cable market for several reasons. Japanese consumers are technically savvy, willing buyers of telecom and data services, and typically have plenty of discretionary income. But it's also a country that is dominated by Nippon Telegraph and Telephone Corp. (NTT), the incumbent telecom-service provider, which imposes high connection and subscription fees on its users, a fact that is widely blamed for stifling the number of Internet users (currently about 17 million).

In other words, it's a market with plenty of pent-up demand for new telecom services that can be bundled and attractively priced. And that's exactly that type of situation Malone relishes.

Industry on a High-Fiber Diet

Optics Suppliers Do Double-Time as Demand Booms

BY CRAIG KUHL

If the lady can spin wool into gold, perhaps you should let her," reads a passage from *The Golden Fleece*. A postmodern take on the Greek fable might very well propose spinning wool — or just about anything — into optical fiber, amid surging global demand for the product.

That demand is being fueled by the frenzied pace of network build-outs and upgrades, and it's pushing fiber manufacturers to — and sometimes beyond — the limits of their capacities. It's also forcing many multi-service providers around the world to line up and wait for every last strand of available fiber.

According to a recent study by Corning Inc., a major optical fiber maker, 70 million kilometers of

Continued on Page 38

Fiber just off the manufacturing line at a Corning facility

PHOTO: CORNING INC.

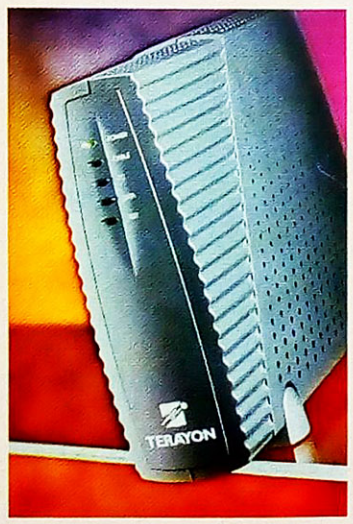
Blocking Broadband Hackers

BY JAMES CARELESS

This caper is so easy that not even Thomas Crown would waste his time on it. The renowned movie jewel thief would find it oh-so-easy to hack into home computers that are attached to the Internet via high-speed cable and digital subscriber line modems that he'd leave it to someone far less sophisticated and cunning.

That's the bad news. The good news is that high-speed Internet-service providers (ISPs) and cable-modem manufacturers are well aware of what's going on in the hacking world, and are taking proactive steps to tighten up their networks and protect them from outside bad actors.

High-speed users have been at particular risk because, unlike conventional dial-up users, cable and



To help shield users from hackers, Terayon has installed firewall software into its TeraJet modems.

DSL subscribers are "always on." That is, they're usually logged on to the Web around the clock. In contrast, dial-up subscribers have to call into a data network and typically log off the network when they've completed a "session," making their PCs inaccessible to hackers.

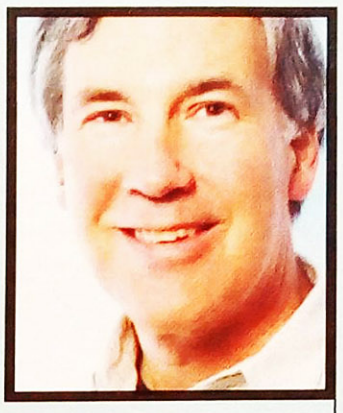
Not all "always on" subscribers are at risk, just those who leave their PCs "unprotected," or without some sort of firewall or password protection. When this happens, their hard drives are accessible to anyone else on their network; particularly if their Windows' Print and File Sharing options are active. (Until recently, these features were left activated by default in Microsoft Corp.'s Windows software, which means that the average novice subscriber was automatically at risk whenever he or she was logged on.)

EASY ENTRY

So how easy is it to find unprotected computers on cable-TV and DSL networks? "In some cas-

Continued on Page 41

Designing a Digital Facility for the Future



TECH SPEAK

A Guest Commentary

BY ROBERT WELLS

What's the next big step in your game plan after you've amassed cable-system holdings reaching some 6.9 million subscribers all over Europe?

For United Pan-Europe Communications N.V. (UPC), the rapidly growing cable company and the continent's second-biggest operator, the task was to devise a way of distributing programming — in digitized form and in many different languages — to its far-flung subscriber base. UPC is majority-owned by Denver-based United GlobalCom Inc. (UGC), which has additional cable holdings in South America and Australia.

The solution comes in the form of what UPC calls its Digital Media Center (DMC), a sprawling, 6,000 square-meter facility on the outskirts of Amsterdam and Denver, HITS pulls together a bundle of digitized programming to be transmitted to a satellite and distributed, as a package, to cable operators.

Calling their nascent project "Euro-HITS," a name they can't use commercially due to trademark restraints, Bachman and Bury decided the basic HITS concept of multiplexing together lots of MPEG-2 digitized program streams would work for them, too.

But they quickly concluded they faced challenges well beyond those tackled by TCI. One obstacle was consumer demand for local-language tailoring. Scandinavians and Dutch viewers want subtitles, while German, French and Polish audiences prefer voiceovers. There were promo trailers and electronic program guide (EPG) listings to be produced for every market

UPC's Digital Media Center will enable the operator to deliver digital programming to MSOs throughout the continent.

due to be formally opened in early September.

UPC spent several years designing the DMC, and it's still fine-tuning the facility. Some of the center's innovations, meanwhile may very well be emulated by other multiple system operators (MSOs) and programmers that have content they want to distribute far and wide.

Among the developments are the ability to transmit more than 64 video channels in real time, with multiple-language voiceovers and subtitles, and its unique "forward-and-store" approach to distributing non-real-time content.

A UPC design team led by Scott Bachman, UPC's chief technical officer, and vice president of engineering and technology Craig Bury, were originally inspired by the pioneering work of Tele-Communications Inc. (TCI) — now AT&T Broadband — and its Headend in the Sky (HITS) facility. Located outside and in many languages.

Another challenge was a crazy-quilt of release windows that studios regularly negotiate for movies on a country-by-country — or, at best, regional — basis. This phenomenon meant any attempt to originate all the near-video-on-demand (NVOD) movies from the DMC — distributing them to a dozen-plus countries and with multiple start times in each — would consume huge amounts of expensive satellite-transponder capacity.

The processing of real-time content — channels coming into the DMC from widely dispersed programmers, mostly in analog form — is managed by several SeaChange International Inc. servers, which oversee the content's "ingest" and its subsequent "playout" to the satellite as Serial Digital Interface (SDI) PAL-601 video and audio streams. MPEG-2 Digital Video Broadcasting-complaint compression is performed by Philips Electronics N.V. compression systems.

If incoming non-real-time content needs enhancement with extra language tracks or subtitles, a network of translators, most of whom work remotely, receive the programming directly from studios or via UPC, and then send UPC time-coded voiceovers and subtitle files. At the DMC, customized bundles of voiceovers, subtitles and EPG content appropriate for individual markets are assembled.

Managing all these pieces is, as the techies say, "nontrivial," since a single movie or other program can have up to 70 components: 20 languages of audio, 20 languages of subtitles, 20 languages of EPG content, plus other elements such as stored source tapes, QuickTime video guides used by translators, and scripts.

To track them all, UPC devised its own extension of the Unique Program Number (UPN) identifier system developed in the U.K. by the European Broadcasting Union for the commercial launch of digital-terrestrial television there. UPN engineers believe their expanded handling system, UPN-32, could be useful to others handling complex bundles of multiple-language programming.

Feeding the non-live programming in real time to more than a dozen regional headends was simply not a cost-effective use of satellite capacity. Instead, Bury and Bachman, along with British consulting firm Broadcast Projects International, decided to capitalize on the relatively low, and declining, cost of servers big enough to store files of DVB-compliant MPEG-2 content.

The resulting system feeds content — usually at faster-than-real-time speeds — from a central content server in Amsterdam to a network of remote content servers (RCS) at regional headends. At 20 Mbps, the system can move a typical movie and its accompanying audio and EPG content — about 6 gigabytes when digitized — out at roughly three times faster than real-time.

The movie file is broken into little pieces and streamed out over the satellite. The transmission format is not Internet protocol (IP) because the receiving servers don't acknowledge arrival of each packet. If the RCS finds it's missing any packets, it sends a message over the AORTA terrestrial data network, which is operated by UPC's chello broadband N.V. unit, and any missing packets are re-sent.

UPC's all-important satellite component is Loral Space & Communications' Telstar 12 (formerly known as Orion 2) satellite, whose footprint extends east of Moscow, down past Israel, eastward across the Sahara, and north to the U.K. and Scandinavia, with spot beams sending strong ancillary signals to Iceland and South Africa.

Further cost savings come in the design of the conditional-access system — another potentially very expensive component — much of which is centralized in Amsterdam with only relatively low-cost pieces of it needed at each remote headend.

Typically, the audio comprises three or four stereo-sound tracks and anywhere from six to 10 monaural tracks. Programming is carried in stereo for Western European markets slated for early deployment of digital set-tops, while Eastern European markets with traditional analog distribution systems get single-channel mono. NVOD products are processed in Dolby Digital, while real-time content will get a stereo-only treatment, at least initially.

Subtitles are added at the time of transmission using a channel management system from Pilat Technologies International Ltd. (formerly Rebus Media Solutions Ltd.) and time-code information from a Drake Automation Ltd. playout automation system. The broadcast schedules for individual systems and the variations in EPG content are all managed centrally from the DMC. Other big pieces of the DMC system are massive archival-storage systems from Storage Technology Corp (StorageTek), subtitling equipment from Screen Subtitling Systems Ltd., and a system for managing archived content from Avalon Data Systems.

Two other UPC-developed technology elements — an intelligent database manager called Sentinel that catalogs incoming audio and subtitle files and a Material Asset Support System (MASS) that oversees the repair and maintenance of the whole DMC complex — are pieces of intellectual property that UPC hopes to

Continued on Page 34

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*According to a November 20, 1998 report by RHK (Ryan, Hankin, Kent, Inc.) of South San Francisco, CA, USA.

Tech Speak,
Continued from Page 32
share with other programmers and MSOs.

In addition to the task of distributing its own and other programmers' content to cable systems it owns, UPC hopes to become a supplier to other operators in Europe and beyond.

The package it's offering other operators includes not just a tidy bundle of digitized TV channels, but also digital-music channels and access to UPC's group buying power for digital set-tops and headend equipment — in short, a complete turnkey digital-cable-delivery plant.

UPC also hopes to share its provisioning and billing system — and even its tech-support resources — with cable operators and their subscribers.

UPC is contrasting its package for helping other MSOs go digital with those of France's Canal Plus S.A. and Kirch Group's Premier World, in Germany. Those packages, UPC says, involve the MSO turning over bandwidth to the digital-programming supplier, who then places its own set-top boxes in subscriber homes and establishes a direct business relationship with the customers.

Potential programming extends well beyond NVOD movies. The digital set-tops UPC plans to roll out, starting in Amsterdam later this year, support not only MPEG-2 video streams, but also two-way flows of high-speed data compliant with the DOCSIS format —soon to evolve into an emerging Euro-DOCSIS standard.

In other words, a built-in high-speed cable modem and access to all manners of multimedia content are part of the bargain.

UPC officials describe the effort as the "portalization" of TV programming. Channels UPC owns or has a partial interest in, as well as those of other programmers, are rapidly being enhanced with Web portals that will be used to gradually grow their relationship with their viewers into a highly interactive two-way street.

For UPC's part, it has Web designers at work in Amsterdam and London, creating content that's specially formatted for TV screens, which lack PC monitors' degree of resolution and are viewed from a distance rather than up close.

Multimedia content can also include the whole gamut of e-commerce, networked videogames and other offerings upon which UPC, for one, is staking much of its hope for pulling ever-expanding revenue streams out of what were once mere "cable households."

In addition to allowing subscribers to "click through" from TV shows to enhanced TV content — including the EPG, weather and traffic reports, community information and the inevitable pizza order — UPC's aims to let its digital set-top subscribers wander out into the undifferentiated Web itself.

UPC's research has shown that, despite the tendency of content designed for PC screens to look bad on TV screens, consumers don't want their interactive-TV platform to erect barriers against roaming the vastness of the Web.

At the same time, UPC reasons, if the TV platform is available, content and service providers will probably be eager to produce content for it, whatever its visual limitations.

UPC and parent UnitedGlobalCom plan to expand their delivery platform so it can send programming originating from the DMC to UnitedGlobalCom-owned systems, as well as other customers, in North America, Latin America and the Asia-Pacific region.

In short, the DMC, quietly going live in Amsterdam, is but one piece, though a vital one, of a UPC's "triple play" of providing TV, high-speed data and telecommunications services.

Robert Wells is a senior analyst with Solista, a Boulder, Co.-based e-business consultancy that counts UPC as one of its clients. He can be reached at bwells@solista.com.

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BROADBAND INTERNATIONAL

Deutsche Telekom's Billing-System Upgrade

BY HANK HOGAN

With 41.5 million customers, 7,000 employees and 118 locations, modernizing customer care is a monumental task

German telecommunications giant Deutsche Telekom A.G. has some lofty goals. Not satisfied with its status as the world's third biggest telephone carrier, the company's corporate vision includes becoming "the most customer-friendly, attractive and successful firm in the telecom industry."

That touchy-feely objective comes from Jürgen Johnen, senior vice president of billing and accounting at Deutsche Telekom, and it refers to the company's Year 2000 billing system.

Behind it all lies a hard reality, and one that impacts all telecommunications companies in the age of convergence: the problem of billing customers for the blizzard of new services. The need drove Deutsche Telekom to partner with corporate-services firm Andersen Consulting to overhaul its billing system.

"The variety of services that telcos and cable companies are offering is requiring changes," says Mark Zohar, an analyst with Cambridge, Mass-based Forrester Research Inc. "IP-based services, interactive TV — all these new services aren't accommodated under legacy billing systems."

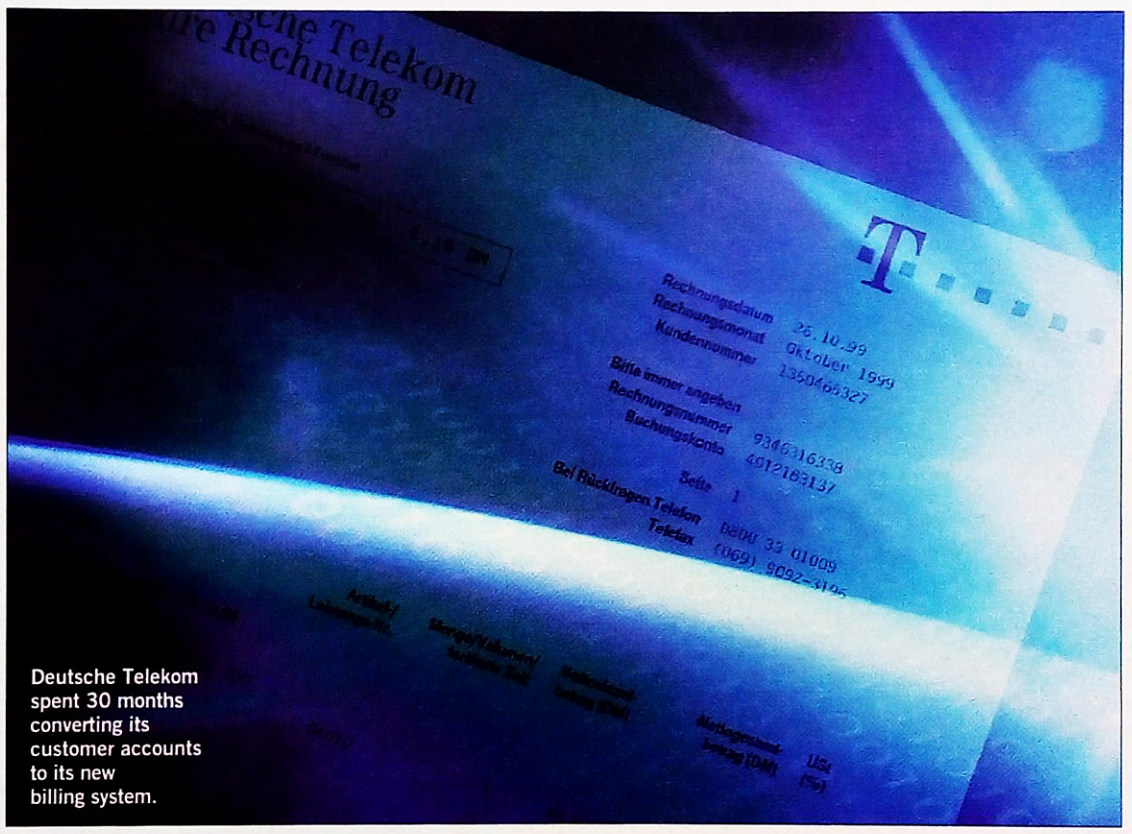
"If you go ordering pay-per-view, some [offerings] are going to cost you $US3.95. If you're buying a boxing match or something, it's going to cost you $US20. Your systems have to be able to support that" difference, notes Paul Hughes, research director at the Boston-based research firm The Yankee Group.

Zohar and Hughes differ on how much the additional pressure that this new need for flexible billing for new services is causing companies. Zohar says the level of billing-system change is climbing. On the other hand, Hughes thinks the level is generally constant as companies engage in ongoing efforts to improve and modernize billing systems.

NO MAGIC FORMULA

In Deutsche Telekom's case, the recent billing-system upgrade involved both the need to modernize and to include new services. In converting to this new system, Deutsche Telekom and Andersen Consulting found that communications and control were vital to success. They also discovered there is no magic formula, software package, or one-size-fits-all solution. Like the billing problem itself, those observations also apply across the telecommunications spectrum.

Billing is one of the most direct and on-going ways a customer interacts with a carrier, whether it is a nationwide telecommunications giant or a local cable operator. With its unified, single-bill presentation of all fixed-network services, it's understandable how Telekom's new system might be considered customer friendly. More than that, the new system allows customers to call up bills online, enabling graphical and other analyses. Therefore, it could be considered attractive. Finally, the new system could make Deutsche Telekom more successful by allowing the company to adapt quickly to new developments in technology or rate structures.



Deutsche Telekom spent 30 months converting its customer accounts to its new billing system.

For all its modern improvements, the billing-system upgrade was actually accomplished with some old-fashioned methods. Over a period of 30 months, beginning in 1997, 41.5 million Deutsche Telekom customer accounts were converted to the new system. During that time, some 7,000 employees at 118 corporate locations were trained, as the new system replaced legacy software and hardware that dated back to first-generation billing systems of the 1960s. Three data centers run the billing for the entire country, and were converted to the new system as well. All this was done without interrupting the daily flow of 2 million bills.

Andersen Consulting acted as a general contractor for the conversion process. The firm began the task by recognizing a basic fact: behind the convoluted and complicated billing system were people. Those people knew how the old system worked, and they were busy using it on a daily basis. Therefore, they were somewhat suspicious of, and resistant to, change. Anything that made their task more difficult wasn't going to be welcome.

"So, all the people who were operating the old billing system at those sites needed to be included and ready to do billing to go to the new system," recalls Hans-Peter Remark, a partner with Andersen Consulting.

According to Remark, Andersen Consulting approached this problem using extensive and focused training. This involved meeting with employees at the various corporate locations, and then making sure that any change solved actual problems and was well understood. It also required identifying and cultivating conversion champions, first at headquarters and then at each of the corporate locations. These individuals sponsored the change and also provided expertise on the new system.

S-CURVES

Remark likens the conversion process to an S-shaped curve. In the beginning, change was slow because there are many obstacles and prerequisite conditions that have to be met. Indeed, Remark says that the initial changeover at Deutsche Telekom began with a single site and a limited number of accounts.

Change spread in a gradual fashion until a critical point was reached — the point in the "S" that heads upward. This signaled the exponential growth of the changeover. As the process continued, more experience and confidence were gained. Therefore, more and more accounts were converted at a time in a parallel fashion. At the peak, Remarks notes that more than 1 million accounts were being converted each day.

However, this rapid changeover slowed when only five or six percent of the total accounts were left on the old system. That was tail end of the "S," or the part where the conversion process flattened out again. Over the years, Deutsche Telekom employees had concocted a number of special work-arounds and exceptions that were embedded in the old billing system. For example, there were instances of special accounts for which a customer was given a certain deal. Or there were bogus part numbers whose sole purpose was to trick the existing system into accepting a particular billing cycle or sequence.

Whatever the case, these required a great deal of data cleanup and special processing during conversion. As a result, the conversion process slowed to a crawl.

During all this, Andersen Consulting was not an idle bystander, but an active partner. "We had a group of people that actually were going out to the field, and every time we had to convert some stuff we had people that were holding hands, at least to the extent necessary," says Remark.

Besides modernizing the billing system, Deutsche Telekom and Andersen Consulting also streamlined and rationalized billing procedures. The team cataloged previously undocumented procedures, including those that applied only to exception processes. The result was a consolidation of the standard billing processes, as well as a decrease in the number of exception or unusual processes.

LESSONS

As for lessons learned from this massive information technology undertaking, Remark says the need for open and thorough communication between those impacted by such a process is mandatory. Without it, the task becomes more than technically difficult: It becomes impossible.

Also, he says, conversion has to be controlled according to a master plan. It's the only way to make changes in parallel. It's also the only way to handle the inevitable special cases and exceptions to the norm. The final lesson is that there's no magic software. Despite the advances in computing power and conversion algorithms, there's no way to make the problem disappear with some automatic conversion routine.

As Remark says, "Unfortunately, there's dirty data and many complications in it, and there is no way of cheap and quick and easy conversion, because the customer still needs to find his old bill." ■

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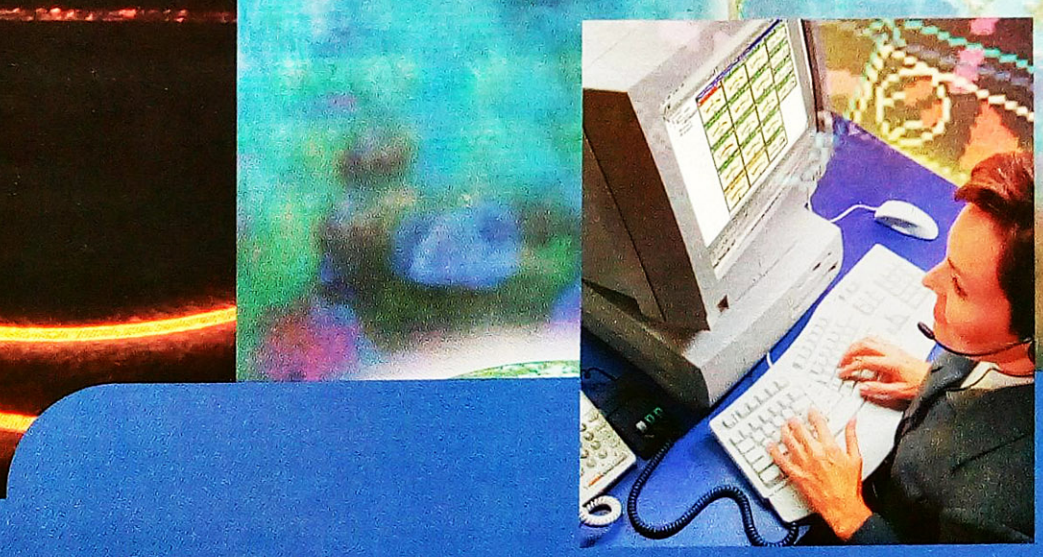

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Fiber,
Continued from Page 31
fiber were installed worldwide last year, a 35 percent increase from 1998. This year, fiber lays are expected to grow by as much as 40 percent, according to some analysts.

Beyond the sheer network expansions, credit the booming demand and installs to the growth of bandwidth-hungry services like Internet-access provision, data and video transmissions, and telephony. And multi-service networks aren't the only ones vying for the fiber fleece, as utility companies and other upstarts develop and expand their own broadband platforms.

The skyrocketing demand for fiber is catching even the experts by surprise, as the world's Internet, data, telephony and digital-video markets take off, each requiring greater amounts of bandwidth, and consequently, more fiber. The result: a worldwide shortage of fiber, with demand far outstripping supply; in many cases, fiber manufacturers are requiring up to a year's lead time for delivery.

"There will be an annual 25 percent to 30 percent potential for fiber growth into 2004, with Western Europe and North America leading the demand," says Patrick Fay, an analyst for KMI Corp., a media research and analyst firm in the United States. "In North America, for example, the demand for fiber in 2000 will equal the worldwide demand for fiber in 1996."

The North American market today accounts for almost half the world's demand for fiber. Last year, fiber installations in the region leapt 45 percent to 32 million kilometers, according to Corning's report.

More companies are also ordering higher fiber counts in the cable they buy, adding to demand. "The cost of buying a higher fiber count for cable is negligible," says Fay. "You don't have to re-trench with higher-count fiber, and that is contributing to future fiber demand."

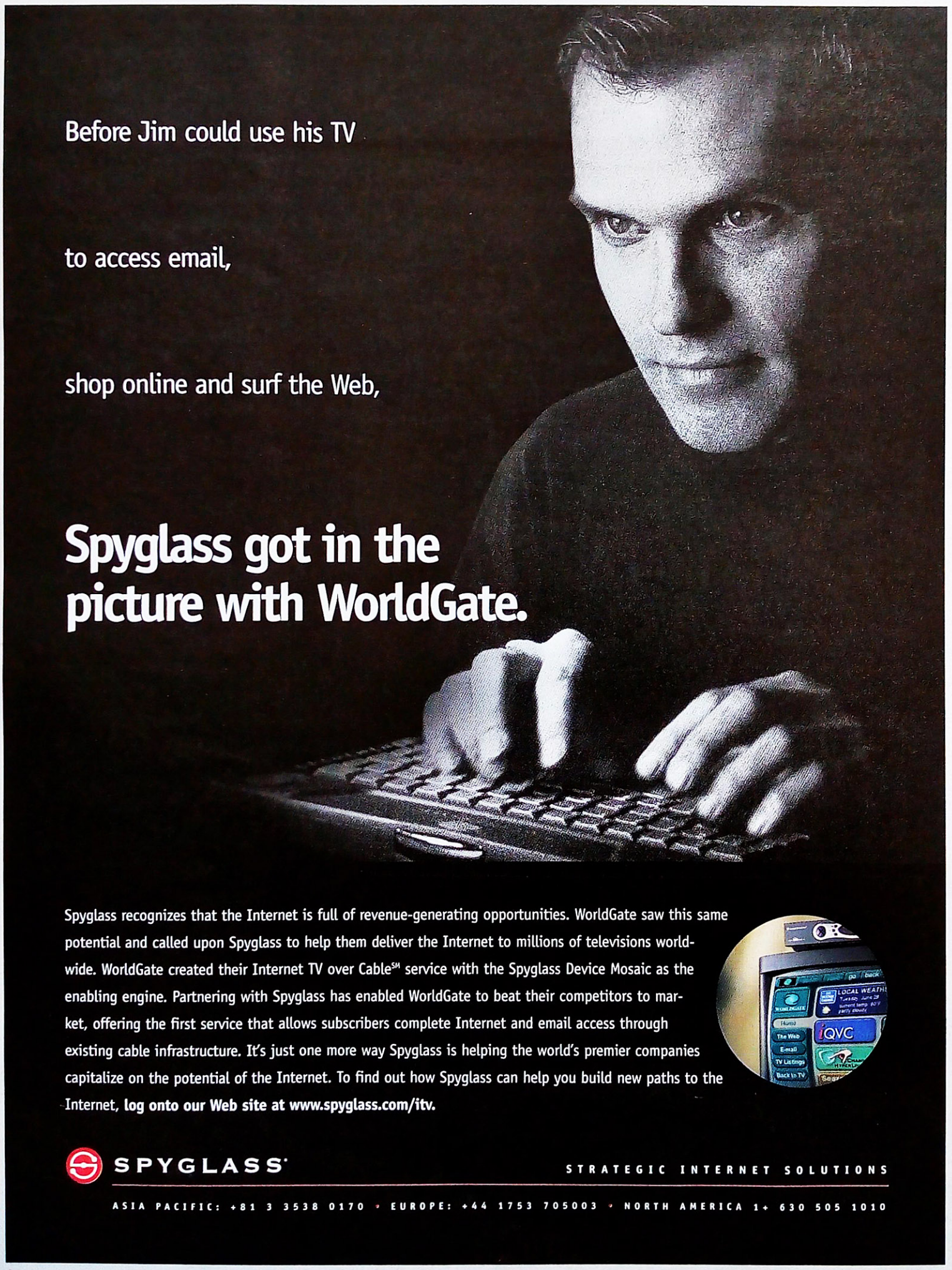
The cost of "bare," single-mode fiber has declined 40 percent over the last year to about $US0.05 to $US0.06 per meter. The lower price is leading many companies that had shied away from more expensive fiber in the past to install it today. But the growing demand may very likely push fiber prices back up. "I wouldn't be surprised if it went to eight cents this year. And for specialty fiber, we'll be paying a 25 to 30 percent premium," to bare fiber said one distributor.

> *"In North America, the demand for fiber in 2000 will equal the worldwide demand for fiber in 1996."*
>
> ***— Patrick Fay, analyst, KMI Corp.***

"The demand to move bits is driving the fiber demand, coupled with a new availability of capital and new network providers," says Dale Niebur, director of fiber marketing at Corning. "The strength in demand reaches every region."

Fiber demand in Japan jumped 40 percent in 1999, he notes, while it grew by 15 percent in the rest of Asia. And in Latin America, fiber buys rose a healthy 35 percent amid recovering economies. "There's big build action in Latin America, especially in Brazil, and Mexico is very strong," Niebur says. "We expect the Asia-Pacific market to grow 25 percent this year as well."

Fiber demand, he added, is expected to come from different sources, with data services leading the charge. "There's a solid growth line for fiber, but underneath are different segments because of the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Workers lay Corning fiber at a Rogers Cable dig in Canada.

PHOTO: CORNING INC.

than send manufacturers scrambling to expand capacity. France-based Alcatel Cable Network Products has delayed, at least temporarily, an entry into the U.S. market because it can't produce enough fiber.

"It's put a limitation on our ability to grow optical network revenues, but it hasn't reduced our market share. The demand has caught everyone by surprise," says John Jutila, the company's vice president of marketing.

Alcatel is also among the manufacturers boosting plant capacity. "We're expanding our facilities in Europe, and just completed our Brazilian expansion and have

Continued on Page 40

diversity of fiber types, so there's not one specific segment or application that will cause fiber demand to drop off significantly."

One of the biggest components of today's demand for fiber is the need for speed. "Data transfer is the big driver, so more fiber-rich architecture is needed. People will use 100 megabit connections, and that requires more bandwidth, and fiber is the way to get there," Niebur says.

Yet just securing the fiber is becoming a monumental challenge. That's prompting companies such as Corning and Lucent Technologies Inc., another leading fiber provider, to expand their fiber facilities at breakneck speeds to meet global demand.

"We put in significantly more fiber-production capacity. We grew 38 percent last year, but we'll continue to struggle to keep up with the demand," says Tim Cahall, Lucent's vice president of marketing and sales for network cable systems. "By spring 2001, we'll see another lump of capacity, which would put us above 30 percent. But it still won't keep pace with fiber expansion."

Lucent has fiber manufacturing facilities in Brazil, Denmark, Germany, Russia, China and Thailand. Cahall notes, however, that expanding capacity at those plants is a bit tricky, because there is about an 18-month lag between when the upgrades are made and when additional product can be delivered.

Still, surging customer demand has led Lucent to invest $US1 billion to increase its fiber-production capacity by 60 percent at those facilities, Cahall adds.

Corning, meanwhile, is investing $US750 million to expand its fiber-production capacity by 50 percent at plants in Australia, Germany, the United States and the United Kingdom. "The current fiber demands have prompted us to change from one manufacturing plant two years ago to five today on multiple continents. Our plans include significant activity on the plant-building front," Niebur says.

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Fiber,
Continued from Page 39
blueprints ready for additional expansion next year," says Jutila. "The question is always how much to expand, and there's always a hesitancy. But when you look at the dynamics driving fiber and the projections for Internet demand, fiber will be a healthy market for several years."

The buoyant demand for fiber is also affecting the smaller distributors of the product.

"We're very surprised at how quickly [the increase in demand] took place. In four months, our lead time went from three weeks to eight months for new customers," says Mike Lynch, vice president of sales and marketing for ICS Inc., a Denver-based fiber distributor. "We're encouraging customers to project fiber allocations one year in advance. If they don't, they'll get shut out."

"The current fiber demands have prompted us to change from one manufacturing plant two years ago to five today on multiple continents."

— Dale Niebur, director of fiber marketing, Corning Inc.

And don't look for fiber demand and installs to diminish anytime soon.

"Cable modems will require more fiber because of the additional bandwidth needed, and that could be a huge part of fiber demands," adds Fay, the analyst. "The trend in technology is toward wireless, which needs some type of fiber backbone, so the demand is there, too."

While manufacturers scramble to expand, some multi-service providers don't appear to be as pressed, thanks to well planned strategies for new builds, rebuilds and upgrades that enable them to forecast how much fiber they'll need.

Telekabel Austria, a unit of United Pan-Europe Communications N.V., is doing just that. "We give our vendor a forecast in the middle of the year for the amount of fiber we'll need the following year, including the entire length, dates and amount of fiber," says Wolfgang Urbauer, technical director of Telekabel Austria's UPC Telekabel Vienna system, which is in the final phase of its network upgrade.

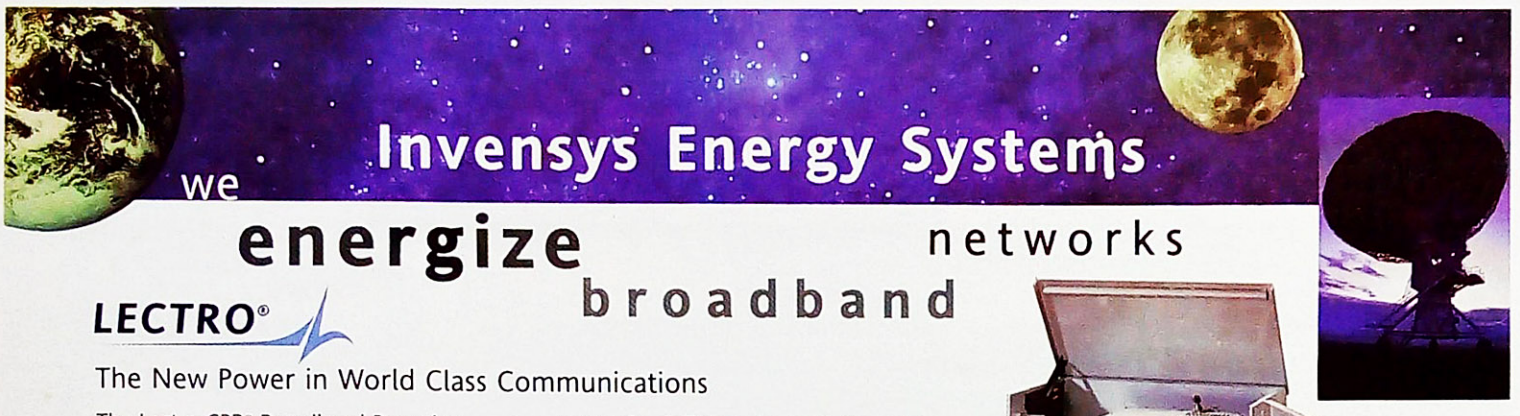
Telekabel, Urbauer adds, uses a Vienna-based vendor to produce all of the company's wireline product, including fiber. The operator's demand for fiber has grown to 96 fibers per cable from 48 fibers per cable over the last three years. By the end of this year, its network will include 430 kilometers of optical trench with 40,600 kilometers of fiber.

Telekabel's strategy of working closely with one local vendor has made the demand for fiber a non-issue, Urbauer maintains.

"Maybe we're in a lucky situation, but I think the secret to our success may be our strategy" of planning and forecasting fiber needs, he says

It's no secret, however, that the global demand for fiber will continue its torrid pace. In the meantime, most industry experts say the best thing network operators looking to add more fiber to their networks can do is get their orders in early.

"And if, by your sheep, you bring me more gold, I will be made glad," reads another passage from *The Golden Fleece*. There's no doubt that today, more fiber would bring a whole lot of smiles. ■



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Hackers,

Continued from Page 31

es, you may just have to click on 'Network Neighborhood' [in Windows]," says Frederick Avolio, president of Avolio Consulting, a U.S.-based computer security firm. "In others, all you have to do is look at packets on the network" to figure out who's logged on.

Unfortunately, the hacking community has noticed this vulnerability, says independent computer consultant Rik Farrow. In fact, the new 911 virus is designed "to scan the cable and DSL networks specifically," he says. To

"We scan our customer ports for traffic that would be typical of hackers."

— Dermot O'Carroll, senior vice president of networking, engineering and operations, Rogers Cable

date, the high-speed networks targeted by 911 include those of PSINet Inc., AT&T Worldnet and Earthlink Inc.

Whenever 911 finds an unprotected computer, it installs itself on the hard drive. Once there, 911 can do everything from deleting the Windows directory to completely reformatting it on the 19th of every month. Worse yet, 911 can also direct the PC's modem to dial 911, thus jamming up a city's emergency phone lines. "As you can imagine, none of those things are good," says Farrow.

Vandalizing people's hard drives isn't all that hackers are doing these days. Increasingly, they're also implanting Trojan Horse programs on their victims' machines. Then, at a time and date preset by the hacker, the program turns on and does whatever the hacker has programmed.

Known as "zombie computers," such PCs are believed to have staged the recent "denial of service" attacks on the Web sites of Yahoo! Inc., eBay Inc. and others. A Canadian teenager is allegedly responsible for flooding selected Web sites with tens of thousands of service requests, which overloaded the processing systems. In Yahoo's case, the site was disabled for more than three hours.

ZOMBIE ATTACKS

The tactic is simple: at the same point in time, zombies all over the world suddenly start inundating a number of sites with bogus queries, thus preventing legitimate messages from getting through. Clearly, the problem here isn't with the cable TV and DSL networks themselves. Instead, it's with users who either don't know how to take security precautions, or don't bother to. That said, these subscribers still pay the bills. Even if they are ultimately at fault, subscribers won't be happy with an ISP that isn't taking great pains to protect them from such attacks. This is why broadband-cable ISPs are doing their part to stop hackers before they get into subscribers' PCs.

There are numerous ways to do this. One is to imitate the hackers'

Continued on Page 42

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AT THE CORE OF CONFIDENCE.

Hackers,

Continued from Page 41

own techniques; in other words, cable ISPs like chello broadband N.V. and Excite@Home Corp. do their own "port scanning" throughout the network, in an effort to identify and warn unprotected users before they get hacked.

As well, "we scan our customer ports for traffic that would be typical of hackers," says Dermot O'Carroll, senior vice president of networking, engineering and operations for Rogers Cable, Canada's largest MSO and an @Home affiliate. "We also monitor our network from a usage perspective to look at somebody who has excessive usage." When a suspicious user is detected, "we will get in touch with them to see if it's legitimate, or if it's not." One telltale trouble sign is too much upstream traffic from a single site. When this occurs, there's a good chance that the subscriber is sending out large volumes of spam, as junk mail is known, or even running an unauthorized commercial service on what has been designed a residential network.

Meanwhile, cable-modem manufacturers are doing what they can to help as well.

FIREWALLS

For instance, Terayon Communication Systems Inc. has recently signed a deal with SofaWare Technologies to install Internet-security-solutions provider SofaWare's Home Secure! Firewall software into Terayon's TeraPro proprietary and TeraJet DOCSIS-compliant cable modems. Designed to be remotely managed by the cable ISP — with optional customer control also built in — HomeSecure! can shield both single PCs and even home-based LANs from hackers, according to company officials.

In fact, when HomeSecure! is used with LANs, "it provides protection for all of the attached PCs, but at the same time it doesn't mess up any of the interactions that you might want to have in the home LAN," says Terayon COO Dennis Picker. What's more, because it's software-based, the HomeSecure! firewall can be updated by the ISP as required, to keep customers one step ahead of the hacking community.

One telltale trouble sign is too much upstream traffic from a single site.

Meanwhile, Ericsson Inc. has come up with simple, yet powerful, protection for its PipeRider cable modems. Called PipeLock, it's a button-activated function that allows users to block communications between their PCs and the network. However, "at the same time they're not disconnecting the modem from the network," says Ericsson product marketing manager David Ethridge. "The operator can continue his status-monitoring capability." Best yet, the user can reconnect quickly simply by pushing the PipeLock button again, with no log-on procedure.

Obviously, these are two product solutions that go a long way toward protecting cable-modem subscribers. That said, it's still ultimately up to them to protect themselves. Subscribers are the only ones able and motivated to monitor their PC's safety at all times, using passwords and ensuring that any software or hardware upgrades don't open their systems up to hackers. That's why subscriber education is so important, and what's leading MSOs such as Rogers to post Web security information on their portal sites. ■

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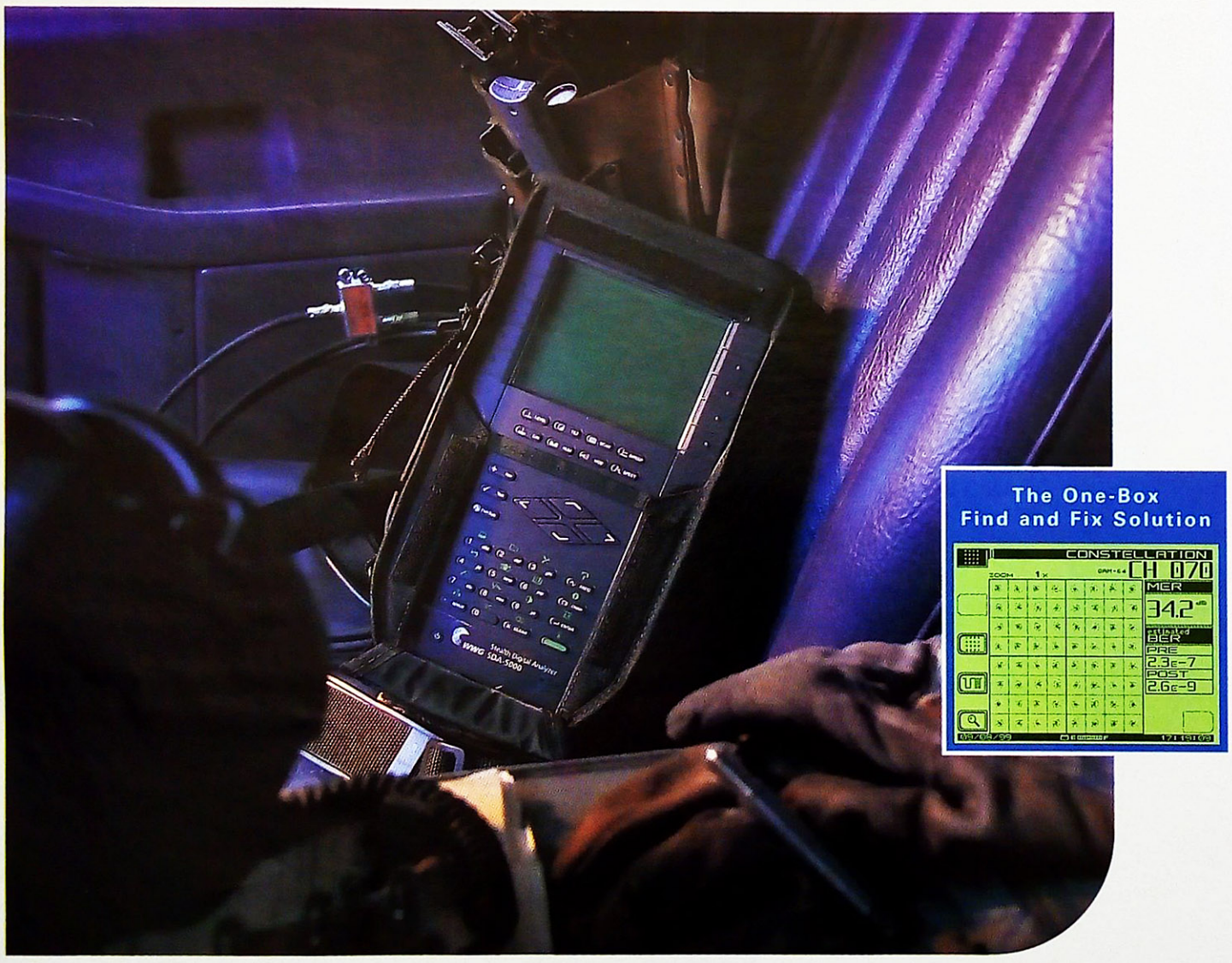

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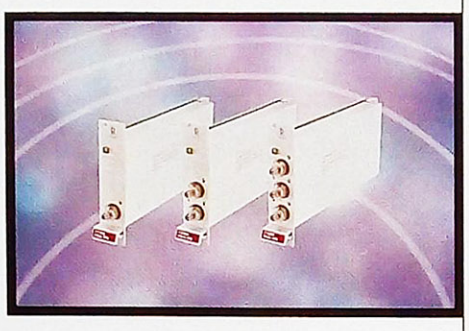
New Products

Optical-power meters

RIFOCS Corp. has introduced single-channel (771RH), dual-channel (772RH) and triple-channel (773RH) optical-power meters, which are based on a 2 mm indium-gallium-arsenide (InGaAs) photodetector specially manufactured for the company. Offering an extended measurement range, from +27 dBm to -60 dBm, all three of the optical power meters are suited for testing DWDM transmission systems, cable TV systems, and high-power output devices such as EDFA amplifiers and pump lasers. The 770RH series optical power meters provide higher measurement speed and resolution of 0.001 for logarithmic dB and linear (W) units.



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Fiber-inspection scope

Clauss Fiberoptics/Telecom Division has added a Fiber Optic Inspection Microscope (FIM 150-200) to its line of fiber optic termination products. The microscope has three built-in magnifications-150X, 175X and 200X; a universal adapter; adjustable light path; and built-in laser barrier filter.

In addition, the microscope fits nearly all manufacturers' ST, SC and FC connector ferrules, according to the company. Its achromatic color-corrected glass objective provides "excellent" image quality, and the focus wheel mechanism has a firm set that consistently maintains the scope's focus.

The user does not need to choose a different adapter for each magnification; there's no need for interchangeable eyepieces; and no need to purchase additional optics.

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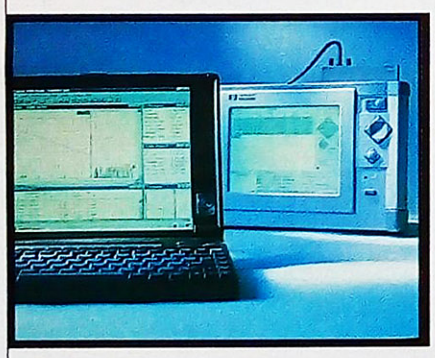
OTDR software package

Agilent Technologies Inc., a subsidiary of Hewlett-Packard Co., has introduced its E6091A OTDR Toolkit II, a software package for use with any of its optical time domain reflectometer (OTDR) products. The new software reduces the time needed for post-processing fiber measurement data through the use of advanced batch mode and reporting features, according to company officials.

By organizing a single project test for a cable carrying hundreds of optical fibers, engineers and central office planners get a better view of all of their system integration or installation projects. The toolkit allows them to create a customized event table for compiling acceptance reports and creating work orders for re-splicing and repair. The software can show up to 40 individual traces on a display screen.



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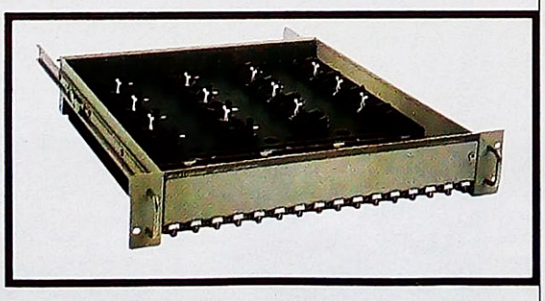
DWDM source-laser diode-mount module

ILX Lightwave has announced a new module for easy mounting of multiple DFB laser diodes. Suited for signal source banks in DWDM test applications, each LDM-4604DFB module has four butterfly mounting sockets that are hard wired to a standard DFB laser pin configuration. Up to four modules and 16 lasers can be mounted into one LDM-4616 chassis. Each socket provides electrical connections for laser drive current, photodiode feedback, TE cooler current, thermistor sensor signals and case ground. These new modules can be mixed with pin-configurable mount modules for mounting pump lasers in the same chassis.



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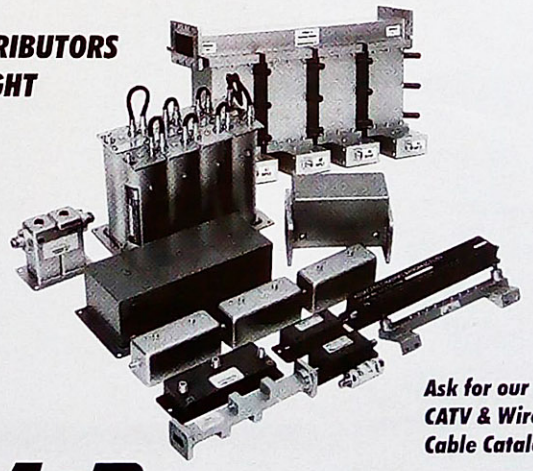

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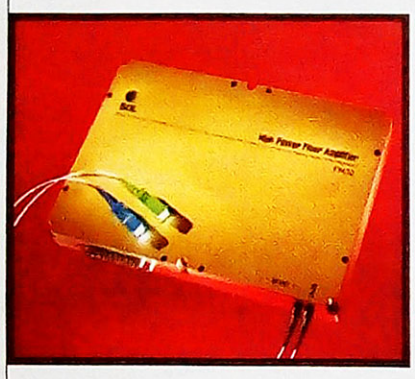
New Products

Optical amplifiers

SDL Inc. has announced two new telecommunications-grade optical amplifiers for use in dense wavelength division multiplexing (DWDM) systems, cable TV systems and metro free-space transmission. The FM30-1 cladding pumped fiber optic amplifier is designed to provide one watt of optical power through a single fiber, while the FM30-8 amplifier is designed to provide 800 mW of optical power split among eight fibers. The amplifiers use SDL's proprietary one watt multimode pump modules, as well as the same fiber technology that is used in the SDL RL30 family of telecommunications-qualified Raman fiber lasers.The FM30-8 enables new advances in high-power optical amplification architectures for broadband cable TV distribution systems, according to the company. Typically, a single erbium doped fiber amplifier (EDFA) is required to provide amplification to each receiver location. The FM30-8 allows the system designer to use one amplifier module to transmit amplified broadband data to eight receiver locations. This split output amplifier is designed for applications requiring the distribution of data to multiple locations such as broadband cable TV transmission. The amplifiers are designed to provide up to 33 dB of gain in the 1545-1560 nm range, with a gain flatness of 1.5 dB and typical noise figure of 5 dB.



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Transponder

Tollgrade Communications Inc. has developed a new power supply transponder, designed for installation into power supplies that include the Alpha XM-Series and XM-Series 2 Power Supplies. The transponder (135PSM1) is part of its Lighthouse Cable Status Monitoring System suite of products. The transponder is dynamically frequency agile in both directions, from 5 MHz to 15 MHz for the return path transmitter, and from 50 MHz up to 135 MHz for the forward path receiver. It has a remotely adjustable output level, it's microprocessor-controlled, and power transmission is remotely adjustable from 30 to 50 dBmV. Additional features of Tollgrade's power supply transponder technology include downloadable firmware that allows for the reconfiguration of the transponder, and programmable analog inputs and digital inputs or outputs that guarantee that the transponder properly interfaces with vendor equipment specifications.

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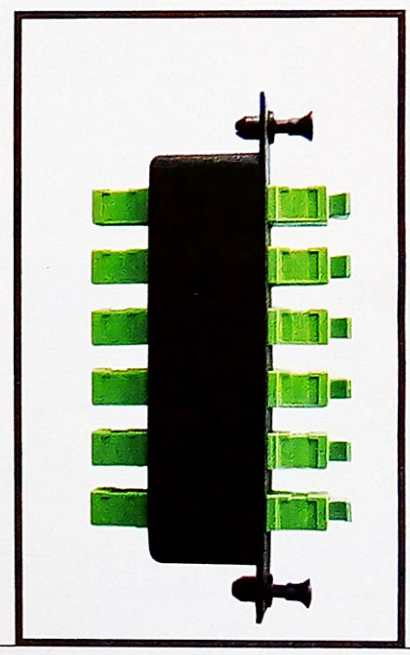
E-mail: lighthouse@tollgrade.com
Web site: www.tollgrade.com

Attenuator magazine

Fiberdyne Labs Inc. has introduced its Buildout Style Attenuator Magazine (FMAGO1X). The six-pack attenuator magazine accepts new Fiberdyne Labs SC/UPC and SC/APC Buildout Style Attenuators. The company offers Lucent, Siecor and ADC compatible models.

The product has the ability to reduce cantilever stress on buildout style attenuators, thus increasing system integrity, according to the company.



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(315) 452-0709 • (800) 882-1587
E-Mail: Tech@cefilter.com
WebSite: www.cefilter.com

Battery rack

Yuasa Inc. has introduced a Zone 4-certified rack for its industrial front termination PowerLock batteries. Subjected to stringent shaker table testing, the new rack has been certified to Zone 4 UBC 94 code.

PowerLock batteries feature capacities of both 110Ah and 150Ah. The batteries are suited for distributed power, cable TV, wireless, PBX and other telecom applications where space is limited and high power is essential.

The Independence PL-110 and PL-150 PowerLock batteries are designed to provide a 48V system on a single shelf of the new Zone 4 rack. This maximizes capacity and minimizes height restrictions.

Yuasa Inc.
P.O. Box 14145
Reading, Pa. 19612-4145 USA
Fax: (1) 610-372-8613
Web site: www. yuasainc.com

Nat Geo,

Continued from Page 18

trying to get carriage will face. The senior vice president of Time Warner Cable expresses interest in carrying Nat Geo, but he also explains that deals, in which an MTV, for example, might shave the price of a popular channel if a system picks up one of its spinoffs, doesn't really work for joint ventures. Why discount CNBC when the benefit of National Geographic revenue doesn't flow to that channel — or even fully to NBC? Dressler theorizes.

"Make no mistake about it, for anyone coming in [to the U.S.], it's a very difficult thing," says Stephen Tapp, vice president and general manager of ChumCity International, which is joint ventured with Rainbow Media Holdings Inc. in the MuchMusic USA channel. "For the most part, channels are marketed separately, even when they're part of a group."

Yet Nat Geo is certainly making significant headway; affiliation agreements are already secured with AT&T Broadband cable systems and direct-to-home platform DirecTV.

Whatever impact NBC and Fox have on Nat Geo's distribution, their presence is certainly written large on the channels in different ways. McGovern explains that because NBC's parent, General Electric Co., is an earnings-driven company, "NBC is much more careful about risk. But News Corp. isn't risk-averse at all, and people make decisions based on intuitions."

NBC has largely stayed out of the day-to-day operations, except in the area of channel development. But "I think Fox is getting much more involved with the hands-on aspects. They own 50 percent of the international channels, and it looks like they'll own 75 percent of the U.S. channels," McGovern says.

While Haslingden won't have oversight of the U.S. channel, he'll benefit from the effort. It's no coincidence that Nat Geo is creating a studio in Washington, D.C. just as it's preparing for the launch of the U.S. channel. The programming coming out of the planned studio will give the international channels a boost by making available more original programming.

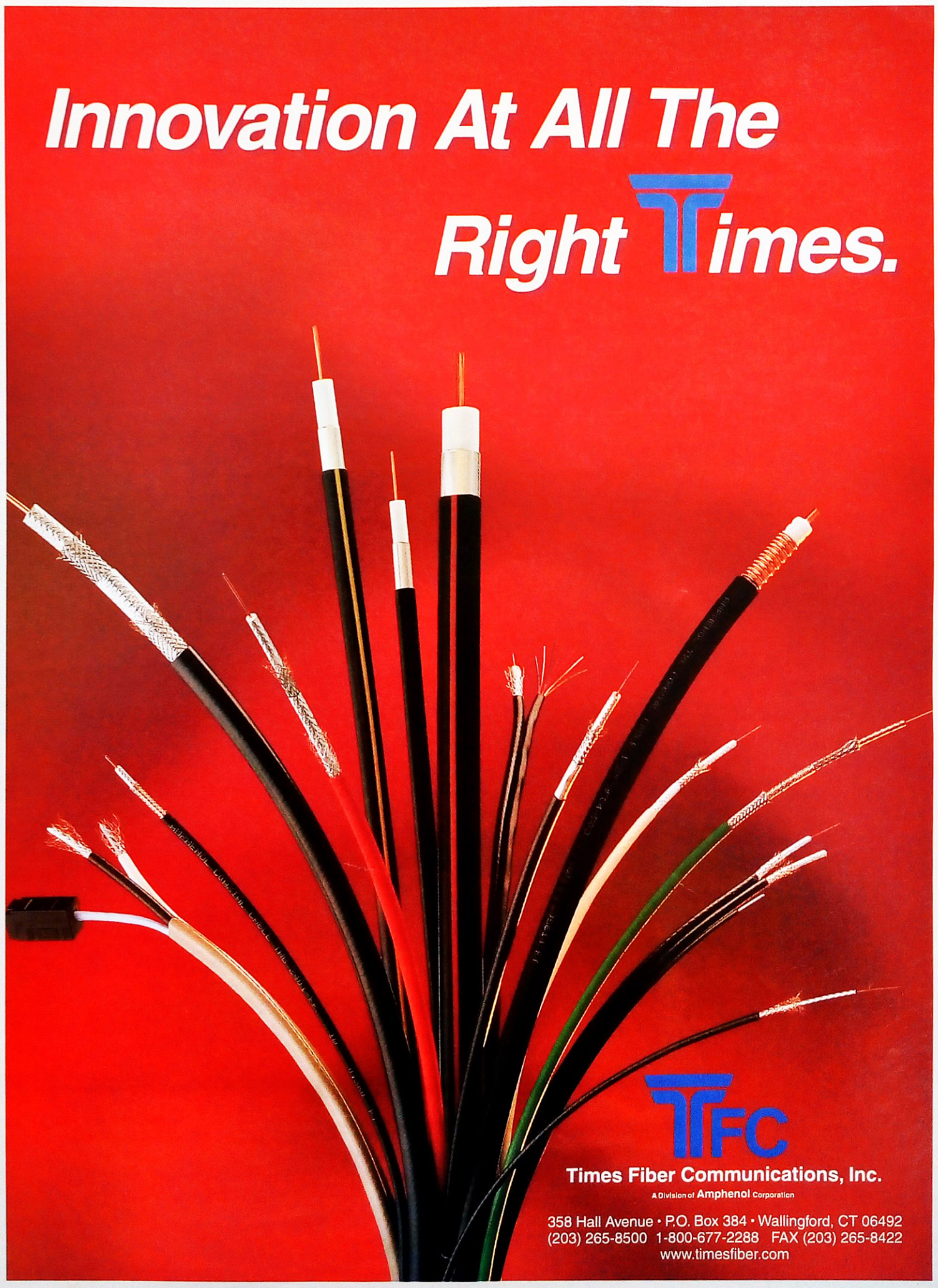
That's a crucial component, in the opinion of the consultant Hamilton. In a nutshell, if Nat Geo is to make it to the next level, it must continue to strive to maintain the company's stellar reputation for high-quality content at the same time it stretches its dollars to produce as much programming as it can afford. And that could well involve exploring lower-cost program formats, says Hamilton.

Many observers have high praise for National Geographic TV, and the blue-chip offerings of its production arm. Among the shows is the *Explorer* series — some of whose episodes, like *Secrets of the Titanic*, are said to have cost about $US1 million an hour. But one source explains that "currently, a lot of programming [on the channel] is acquired, or comes from the National Geographic library, and doesn't pass the freshness test."

Less expensive forms of programming are something that Haslingden says the channel group might get into. But don't expect *Who Wants to Marry a Bird-Crazy Millionaire* on his channels. "We're known for the stunning documentaries that National Geographic has pioneered, and we're not going to give that up for anything," he says. Among the new vistas he's considering are content on the TV or Web site that will allow viewers to book travel excursions or get "tons of more information" about the subject matter of documentaries.

Credibility is certainly what it's all about for National Geographic. Sure, shock and sleaze may sell. But Nat Geo proves that the path less chosen can dazzle in its own way.

"One of the things I said to my staff from '96 forward is: 'Understand that what you're doing is as important as what the original founders of this magazine did and the explorers did,'" McGovern says. "To the 25-year-olds, it probably sounded abstract, and to the 45-year-olds, it sounded arrogant. But I felt it, and I still do." ■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Multichannel NEWS International CED

2000 Guide to Cable-Modem Vendors

Company name	Modem model	Standards	Telco return?	Availability	Price	No. deployed to date
ALCATEL www.alcatel.com	DVB INA	DVB-DAVIC	N/A	Now	N/A	N/A
ARRIS INTERACTIVE (NORTEL/ANTEC) www.arris-i.com	Cornerstone LCP	DOCSIS	No	Now	Based on quantity	N/A
	Cornerstone Cable Modem 100	DOCSIS	No	Now	Based on quantity	N/A
	CM200U (USB)	DOCSIS	No	N/A	N/A	N/A
ASKEY INTERNATIONAL www.askey.com	CME010	DOCSIS	No	Now	N/A	N/A
	CME030	DOCSIS	No	Now	N/A	N/A
BEST DATA www.bestdata.com	SmartOne CMX100	DOCSIS	No	Now	Competitive	25,000+
BLONDER TONGUE www.blondertongue.com	DataXpress	DOCSIS	No	Now	Competitive	N/A
CABLETRON www.cabletron.com	SSR265I	DOCSIS	No	N/A	N/A	N/A
CISCO SYSTEMS INC. www.cisco.com	UBR924	DOCSIS	No	N/A	$US899+	N/A
	Cable Data System	DVB	N/A	N/A	N/A	
COM21 INC. www.com21.com	DOXport 1010	DOCSIS	No	Now	N/A	N/A
	DOXport 111	DOCSIS	No	Now	N/A	N/A
	ComUNITY 1000	Proprietary (ATM)	Yes	Now	N/A	N/A
	ComUNITY 2000	Proprietary (ATM)	Yes	Now	N/A	N/A
	DVB Cable-Modem Router	DVB	No	Yes	N/A	N/A
COMBOX* www.combox-i.com	UCMT and UCM	DVB	N/A	Now	N/A	N/A
DAEWOO www.daewoo.com	Cable Modem	DOCSIS	No	Now	N/A	N/A
DASSAULT www.dassault-at.com	Web C@ble	DOCSIS	No	Now	N/A	N/A
DELTAKABEL** www.deltakabel.nl/	DEMOS-38	DOCSIS and DVB-DAVIC	No	N/A	N/A	N/A
DIAMOND MULTIMEDIA www.diamondmm.com	Cable Modem (USB and Ethernet versions)	DOCSIS	No	N/A	N/A	N/A
DX ANTENNA www.dx-trading.co.jp/	DAZ8801	DOCSIS	No	Now	N/A	N/A
ELSA www.elsa.com	Cable Modem	DOCSIS	No	N/A	N/A	N/A
ERICSSON www.ericsson.com/hip/piperider/	PipeRider	DOCSIS	No	Now	Competitive	N/A
E-TECH www.e-tech.com	CABLazer ICE 200	DOCSIS	No	Now	N/A	N/A
FUTURE NETWORKS/ CASTLENET TECHNOLOGY www.future-networks.com	FN100	DOCSIS	No	Now	$US199	Trial Quantities
	FN110	DOCSIS	No	May 2000	$US209	Trial Quantities
GADLINE www.gadline.com	CyberMode	DOCSIS, EuroDOCSIS and proprietary	No	Now	N/A	Thousands
GVC www.gvc.com	Cable Modem	DOCSIS	No	N/A	N/A	N/A
	Internal card	DOCSIS	No	N/A	N/A	N/A
HARMONIC INC. www.harmonicinc.com	CyberCity	Proprietary	Yes	Now	N/A	N/A
HB TELECOM www.hbtelecom.co.uk	DVB Cable Modem	DVB	N/A	Now	N/A	N/A
HUGHES NETWORK SYSTEMS www.hns.com	DVB Cable Modem (via Cisco OEM agreement)	DVB	N/A	N/A	N/A	N/A
HYBRID NETWORKS www.hybrid.com	201/202 Type	Proprietary	Yes	Now	Competitive	40,000+
	231 Type	Proprietary	No	Now	Competitive	33,000+
INTEGRITY COMMUNICATION www.integrity-modem.com	PTP-10	Proprietary	No	Now	N/A	N/A
	PTP-100	Proprietary	No	Now	N/A	N/A
	Con X	DOCSIS	No	Now	N/A	N/A

Company name	Modem model	Standards	Telco return?	Availability	Price	No. deployed to date
JOOHONG www.joohong.co.kr	SuperLink 2000	DOCSIS	No	N/A	N/A	N/A
MOTOROLA www.motorola.com www.surfboard.com	SB3100	DOCSIS	No	Now	$US219	100,000+
	SB3100D	DOCSIS	No	Now	$US269	5,000+
	CyberSURFR Wave	Proprietary	N/A	Now	$US249	750,000+
	CyberSURFR Link	DOCSIS	No	Now	$US239	5,000+
NETGAME www.ngcable.com	Juno	DOCSIS	No	N/A	N/A	N/A
	Phazer	DOCSIS	No	N/A	N/A	N/A
	NeMo	Proprietary	N/A	Now	N/A	N/A
NETGEAR www.netgearinc.com	Cable Modem	DOCSIS	No	Now	N/A	N/A
PHASECOM www.speed-demon.com	SpeedDemon	Proprietary	N/A	Now	N/A	N/A
POWERCOM www.powercom.com.tw	PCR 1500	Proprietary	Yes	Now	N/A	N/A
RF NETWORKS www.rfnetworks.com	Model 8023	Proprietary	N/A	Now	N/A	N/A
SAMSUNG TELE-COMMUNICATIONS www.samsungtelecom.com	SMC-100R	DOCSIS	No	Now	Competitive	175,000+
SHARP www.sharpusa.com	Cable Modem	DOCSIS	No	N/A	N/A	N/A
TELDAT www.teldat.es	Aura	DOCSIS	No	N/A	N/A	N/A
TERAYON COMMUNICATION www.terayon.com	TeraJet	DOCSIS	No	Now	Based on volume	15,000+
	TeraPro	Proprietary (S-CDMA)	N/A	Now	Based on volume	340,000+
THE INDUSTREE www.industree.nl	CableFleet	DVB	N/A	Now	N/A	N/A
THOMSON CONSUMER ELECTRONICS www.thomson-broadband.com	RCA DCM105	DOCSIS	No	N/A	N/A	151,000+
	RCA DCM205	DOCSIS	No	Now	Under $US210	50,000+
	RCA DCM225	DOCSIS	No	N/A	Under $US210	N/A
	DVB INA and EuroModem	DVB	No	N/A	N/A	N/A
3COM www.3com.com	CMX (external)	DOCSIS	No	Now	N/A	350,000+
	CMX (internal)	DOCSIS	No	Now	N/A	3,000+
	TMX (external)	DOCSIS	Yes	Now	N/A	3,000+
	VSP (internal)	DOCSIS	Yes	Now	N/D	20,000+
TONNA ELECT. www.tonna.com	CableG@te 1000T	Proprietary	Yes	Now	N/D	N/D
	CableG@te 1000C	Proprietary	No	Now	N/D	N/D
TOSHIBA www.tais.com	PCX 1000	DOCSIS	No	Now	$US299	150,000+
TURBOCOMM www.turbocomm.com.tw	EC-100	DOCSIS	No	Now	$US250	80,000+
TURBONET www.turbonet-comm.com	TurboPort	DOCSIS	No	Now	N/A	N/A
XROSSTECH www.xrosstech.com	Cruiser CM	DOCSIS	No	N/A	N/A	N/A
ZENITH www.zenith.com	HomeWorks Pro	DOCSIS	No	Now	N/A	N/A
ZOOM TELEPHONICS www.zoom.com	10Base-T Model 5011	DOCSIS	No	Now	$US249	Sampling
	10Base-T/USB Model 5021	DOCSIS	No	N/A	N/A	N/A
ZYXEL COMMUNICATIONS www.zyxel.com	Prestige 310	DOCSIS	No	Now	$US249	N/A

* Terayon signed a deal in February 2000 to acquire ComBox.

** Lucent Technologies Inc. signed a deal in March 2000 to acquire DeltaKabel.

SOURCES: GecKo Research & Publishing (www.catv.org), Cable Datacom News (www.cabledatacomnews.com), modem vendors, *CED* and *Multichannel News International* research

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chello

Continued from Page 25

Chello's card on that front? Content. Its parent UPC is emerging as a major player on the European programming scene through its UPCtv arm that has created a swath of channels. And in March UPC agreed to buy the European programming heavy SBS Broadcasting S.A. in a deal that's touted as being just as much about the Internet as it is about TV. SBS's 10 broadcast-TV stations, for example, could provide key local content and ad sales for chello's in-country operations.

What's more, chello itself has more than 150 content partners, Lynch says, and it's pushing hard to offer full-screen streaming video. In Web-savvy Sweden, chello recently sponsored a streaming-media festival with UPC shareholder Microsoft Corp. That content could also help it win over cable operators that aren't owned by UPC and that could deploy their own cable modems and keep 100 percent of the revenue.

"Chello has the opportunity to have content make the difference," says Brian Seth Hurst, the worldwide managing director of convergent media at entertainment and marketing-communications firm Pittard Sullivan, which has done work for UPC in the past. Without content, he notes, DSL and independent cable-modem deployments by cable operators are nowhere near as compelling as a fully integrated offering.

But some DSL providers are getting smart. Among them, Spain's Telefónica S.A. has become a content player in its own right over the last couple of years, and in March nailed down a deal to buy Dutch TV-programming producer Endemol Entertainment Holding N.V. for $US5.3 billion, illustrating just how aggressive it is.

"Another weapon that we have," says Lynch in addressing the competitive landscape, "is that we're going to be cross-platform." The company is dead set on providing its service not only to computers, but also to TVs — thanks to UPC's planned digital-set top rollout — and to mobile phones through UPC's Priority Telecom unit.

"If a [telco] has an ISP and wants to launch DSL, obviously they can do that, and we'll have to compete with that," reckons Lynch. "But if you're able to get chello over your TV ... and extend it out to mobile phones, it's a very good opportunity to tie people in. Cable's our preferred route, but it's not our only route." ■

Zee

Continued from Page 22

nicator? I have a bit of question mark in this effort to start an overarching media company."

Whether or not Zee becomes overextended, there is no taking away from the sheer magnitude of its achievements to date. It entered the market at a time when audiences were fed up with the bland fare on the state-run Doordarshan channels, which were filled with programming that had largely gone unchanged for two decades.

Zee's dynamic mix of programs gave audiences their first taste of what commercial-TV entertainment programming could be. Zee's ability to turn a profit in its first year of business is just one indication of its success. Another is its current viewer base. Collectively, its channels reach 180 million viewers in Asia and another 15 million homes in Europe, Africa and the United States, according to the Mumbai-based Operation Research Group (ORG), an independent media-research firm.

ORG's latest findings confirm how Zee has once again begun to rally its forces and beef up its programming. Of the top 10 shows in cable and satellite homes in the first quarter of this year, eight were from the Zee network.

It's clear that Zee Telefilms is charging ahead in the Indian multichannel-TV race. And judging by the political astuteness and vision Chandra has displayed so far, there is every possibility that he will become the media mogul of the subcontinent that he's aimed to be. ■

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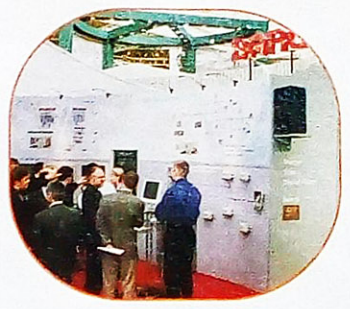
Successful Launch for Broadband Communications event

Broadband Communications Europe 2000, taking place at Olympia in London between the 17 and 19 October has got off to a flying start having signed over 70 exhibitors since its launch at the beginning of the year.



Known as BCE 2000, the event has taken the autumn time slot previously occupied by ECC. Mark Moloney, organiser comments: "Having organised ECC for eight years, we were delighted to have the opportunity of continuing our involvement with the broadband industry when it became apparent that the UK's cable association was about to close. BCE 2000 allows us to improve and develop on a successful formula by keeping on board the cable operators and developing the event's content and marketing to attract telecom and mobile network operators."

By the time it opens in October this year, BCE 2000 will consist of a 200 company exhibition, a strategy conference, free technical seminar programme, content and programming arena and a full social programme. For free exhibition tickets or to register for the conference, please call +44 20 7610 3001 or check out the web site on www.broadband-convention.com

BIG NAME PRESENTATIONS AT STRATEGY CONFERENCE

Richard Callahan of Callahan Associates International, Adam Singer of Flextech/Telewest and Mark Schneider of UPC are just three of the speakers who have confirmed as part of a programme that has a distinctly European flavour. Simon Bond, conference director comments: "I'll be signing leading content providers from France and Germany and operators from five European countries will be on the platform. What is also encouraging is that two of the participants currently battling for the UK's new mobile licences will be joining us in our session on 3G Mobile Broadband"

Current BCE Conference sessions include:

- **The Leadership Forum**
- **3-G Mobile Broadband**
- **Customer Relationship Management and Marketing**
- **Interactive Content**
- **Broadband Internet**
- **Industry Structure and Regulation**

To make a reservation call: +44 20 7610 3001 or look at www.broadband-convention.com

Multichannel News International

Technical Seminars are staged within the heart of the exhibition and are free to visitors. The programme will be on the event's web site as of mid June 2000.

SOCIAL PROGRAMME MAKES BCE A TRUE CONVENTION

One of the unique features of BCE 2000 is its social programme. This kicks off with a VIP reception for all non UK visitors at London's Intercontinental Hotel on Monday 16 October. The following evening is the 1000 seat World Broadband Dinner at the prestigious Royal Lancaster Hotel. The Gala Party on 17 October steals the show as exhibitors will have the opportunity of entertaining their clients on the World's biggest Ferris wheel - the London Eye - directly before partying at London's new Aquarium opposite the Houses of Parliament.

NEW CONTENT ZONE BRINGS PROGRAMMERS BACK TO OLYMPIA

Over a dozen programmers have signed into the show's new Content Zone, a designated area within the main exhibition. Interactive content providers wil be able to demonstrate their innovative product on the BCE Arena and in the show's broadband bistro and visitors will be able to see live presentations from programmes at Olympia.

Exhibitors Support BCE 2000

The major suppliers to the industry have decided to lend their support by confirming their participation early. The show has kept long time supporters Antec, Barco, Motorola/GI, Pace and Scientific Atlanta, rebooked last years new entrants of Cisco and UPC and managed to attract new exhibitors including Ericsson, Lucent Technologies and Servcast.

Chello broadband attended ECC last year and Sylvia MacDonald their events manager said: "We were impressed with the organisation and with the quality of visitors, and so have decided to expand our floor space this year. BCE 2000 will be an important event for the broadband industry and as we are leaders in European broadband internet we are definitely going to be there."

Mike Norman, event sales director is upbeat: "We've signed over 70 exhibitors so far and having just returned from NAB in Las Vegas I've got another twenty that I expect to confirm by mid May. We have a very strong marketing campaign including flying exhibitor prospects to London which has caught suppliers' imagination; the result will be a much bigger show for visitors in 2000."

SCTE BACKS TECHNICAL SEMINAR PROGRAMME

All papers presented at the BCE technical seminar programme will be checked by the SCTE to ensure their content is relevant and informative. Sponsored by Multichannel News International, the seminar programme is a big visitor attraction. "With the SCTE, we will make sure that presentations are short and to the point. Last year we had a three day programme and judging by the industry's response so far, I'm hoping to build two seminar theatres and stage two concurrent programmes" comments marketing manager, Declan Gane.

Business Press lend their support

The world's leading titles are lining up to support BCE. Multichannel News International, Cable & Satellite Europe, CSCI and Broadcast have all received official status. In all 12 magazines have so far joined in the publicity, including Kagan Euromedia, Cable & Satellite Intenational, TBI and Communicate. This compliments the massive promotion behind the convention which, as well as the usual direct mail includes a telemarketing campaign and flying in key buyers into London from Europe.

Executives of broadband operators requiring more information on the free flights service should e-mail event manager Mindy Crosby on mindyc@tradesexhibitions.com.

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Technology and Equipment Buyer's Guide

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Marketing Manager

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Toll Free: 1-800-523-6678
Matt Aden
SVP Sales and Support

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TAKING Stock

BY MIKE GALETTO

INVESTMENTS

One-Stop Shopping

THE BUNDLING OF SERVICES is seen as one of the main drivers behind what's become known as the broadband-communications industry. Now, that concept has spilled over into the investment arena, with a new vehicle that will let investors make a broadband play and sidestep the often-confusing buzzwords, technology and slew of industry players.

Broadband Basket

COMPANY	Shares per HOLDR
LUCENT TECH.	29
NORTEL NETWORKS	14
MOTOROLA	6
QUALCOMM	8
JDS UNIPHASE	8
BROADCOM	2
CORNING	3
SYCAMORE NETWORKS	3
APPLIED MICRO CIRCUITS	1
TELLABS	4
TERAYON COMM. SYSTEMS	1
PMC-SIERRA	1
COMVERSE TECHNOLOGY	2
SDL	1
CONEXANT SYSTEMS	2
NEXT LEVEL COMM.	1
RF MICRO DEVICES	1
SCIENTIFIC-ATLANTA	2
CIENA	1
COPPER MTN. NETWORKS	1

Source: Merrill Lynch

Merrill Lynch & Co. last month introduced what its "Broadband HOLDRS" depository receipts. They represent a basket of stocks from 20 industry companies but trade as a single issue — a sort of mutual fund for the broadband market.

"Investors and investment experts view broadband as a distinct sector that offers a unique opportunity," says Steve Bodurtha, Merrill Lynch's head of customized investments. "But like much of the new economy, it's difficult for many investors to try to pick one or two stocks in the sector."

The American Stock Exchange-traded Broadband HOLDRS, he adds, are not only simpler, they're also more efficient and let investors avoid, for example, paying multiple commissions as they would if they were to buy each stock individually. They trade under the ticker "BDH."

The component stocks, meanwhile, are specific to equipment makers. Bodurtha says the aim is to provide a "highly focused" investment product, adding that there are no plans to expand the basket to include content providers.

The Broadband HOLDRS bowed amid a wider battering of stocks, especially those in the high-flying tech sector. After opening at $US93.50, they reached as high as $US99.25 before declining to $US82.94 at press time.

Bulking Up on Bonds

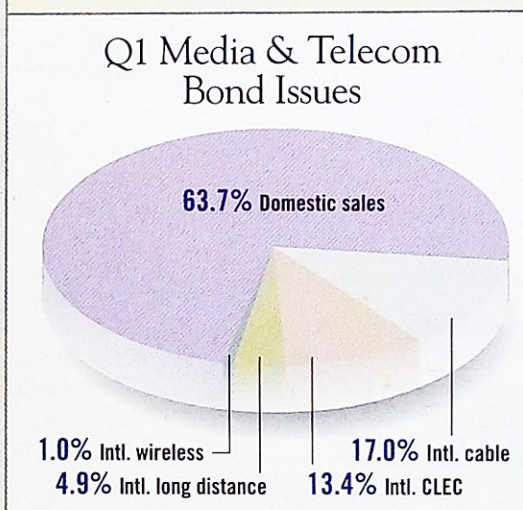
FINANCING

THERE'S NO SHORTAGE of talk about how the international business is becoming more and more important to industry companies. Nor is it any secret that it's also a major element of the financial side of the business, and some recent data illustrates its role in the high-yield debt market.

In the first quarter of this year alone, non-U.S. companies accounted for 36.3 percent of cable and telecommunications high-yield debt issues, according to a report by investment bank Warburg Dillon Read. That's about $US5.8 billion of a total $US16.1 billion issued. International cablers sold about $US2.7 in high-yield bonds in the first quarter.

"International should continue to be a big component of the high-yield market," says Aryeh Bourkoff, Warburg's senior telecommunications and cable-television analyst. "The [percentage] growth of the high-yield market in other countries will be higher than in the U.S."

Heavyweights like United Pan Europe Communications N.V. (UPC), NTL Inc. and Telewest Communications plc have grabbed a lot of headlines, but they certainly haven't been the only high-yield issuers. In total, cable operators outside of the U.S. have sold about $US20 billion in junk bonds over the last few years, making them the biggest issuing international sector, Bourkoff notes.



Souce: Warburg Dillon Read

To be sure, the maladies that whacked financial markets in April are weighing on the ability of companies to come to market with new paper. "The backlog of high-yield issues has certainly slowed," says Bourkoff, adding that "mutual fund outflows have led to a quieter primary market." UPC, for one, is expected to satisfy its financing needs for the remainder of this year with bank loans and equity sales, rather than looking to the bond markets.

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THE PAY TV PAYOUT

Company	Ticker	Exchange	Close 3/17	Close 4/20	Percent Change	52-Week High	52-Week Low
AsiaSat	SAT	NYSE	$44.75	$30.44	-31.98	$45.93	$13.75
AT&T	T	NYSE	$53.19	$49.94	-6.11	$63.00	$41.50
British Telecom	BTY	NYSE	$193.25	$177.00	-8.41	$245.00	$143.00
BSkyB	BSY	NYSE	$170.00	$142.25	-16.32	$201.93	$51.62
Broadcom	BRCM	Nasdaq	$217.56	$152.50	-29.91	$253.00	$29.00
Cablevision Syst.	CVC	NYSE	$63.00	$64.31	2.08	$91.87	$55.00
Cable & Wireless	CWZ	NYSE	$92.56	$72.44	-21.74	$95.75	$44.50
C&W HKT	0008	Hong Kong	$2.83	$2.20	-22.18	NA	NA
Canal Plus	CNLP	Paris	$263.30	$209.14	-20.57	NA	NA
Com21	CMTO	Nasdaq	$54.44	$26.25	-51.78	$84.00	$10.37
Deutsche Telekom	DT	NYSE	$84.00	$67.63	-19.49	$100.25	$36.01
Excite@Home	ATHM	Nasdaq	$28.50	$17.94	-37.06	$99.00	$17.06
Flextech	FLXT.L	London	$26.95	$24.85	-7.81	NA	NA

Company	Ticker	Exchange	Close 3/17	Close 4/20	Percent Change	52-Week High	52-Week Low
Globo Cabo	GLCBY	Nasdaq	$20.50	$14.81	-27.74	$25.00	$1.06
MIH	MIHL	Nasdaq	$84.00	$44.75	-46.73	NA	NA
News Corp.	NWS	NYSE	$60.13	$44.81	-25.47	$67.00	$26.31
NTL	NTLI	NAS	$107.06	$68.88	-35.67	$109.68	$43.60
PanAmSat	SPOT	Nasdaq	$53.63	$41.94	-21.79	$74.25	$26.37
Rogers Comm.	RG	NYSE	$30.31	$27.06	-10.72	$42.25	$15.18
Scientific-Atlanta	SFA	NYSE	$64.91	$61.00	-6.02	$77.00	$12.75
Shaw Comm.	SJR	NYSE	$26.19	$24.25	-7.40	$29.50	$13.15
Telefónica	TEF	NYSE	$79.13	$69.00	-12.80	$94.93	$40.76
Televisa	TV	NYSE	$73.94	$59.56	-19.44	$87.00	$31.37
Telewest	TWSTY	Nasdaq	$66.00	$63.75	-3.41	$90.00	$33.87
UnitedGlobalCom	UCOMA	Nasdaq	$94.63	$52.00	-45.05	$114.62	$21.75
UPC	UPCOY	Nasdaq	$72.33	$35.63	-50.75	$79.45	$12.95

Source: CNET Investor

News Hounds,

Continued from Page 6

visa also owns a big stake in Mexico City MSO Cablevisión.

Multivisión, which is having trouble maintaining its own base of subscribers — it lost 20,000 to 30,000 of them last year, according to programming sources — responded in kind. In February, amid an aggressive publicity campaign, the company announced it would fill the void by luring back to Mexico award-winning journalist Raúl Peimbert. Before joining MVS, Peimbert had built a career in the United States working at Spanish-language broadcast networks Univisión and Telemundo, and at panregional news channel CBS TeleNoticias (now owned by Telemundo). Strengthening its position further, MVS has also announced a strategic alliance with Bloomberg Media, which provides business-news blocks to both Más and Stereorey.

Imagen jounalists Pedro Ferriz de Con (left) and Carmen Aristegui flank Televisa pay TV honcho Jorge Alvarez Hoth.

The departure of MVS's star reporters had consequences, however, such as the cancellation of *En Blanco y Negro* (*In Black and White*), a news program that was popular among the intellectual set. The trio is not employed directly by Televisa. Instead, they created their own radio- and TV-production company, Grupo Imagen. It produces the Imagen channel, a joint venture with Televisa in which the partners split costs and revenue down the middle.

Controlling expenses is certainly a concern at Mexico's family-owned media empire. Oversized budgets were the reason Televisa pulled the plug on its financial-news channel, Conexión Financiera. Paradoxically, though, its continues to support its money-losing, decade-old general-news channel, ECO.

Whatever the rationale, Imagen's lean-and-mean visuals, consisting of little more than a TV camera filming talking heads in a TV studio, is hardly budget-breaking stuff. "We'll be doing more live-action, on-location filming over time," Ferriz de Con insists.

But how does Imagen help drive Televisa's DTH train, when movies and sports, not news, are the traditional drivers of pay TV platforms? Alvarez, who repeatedly declines one-to-one press interviews, won't comment.

But Ferriz de Con indicates that Televisa's investment in the channel had more to do with projecting the image of a bastion of a free, independent, critical press, rather than that of an organization supporting the status quo.

"Televisa wants to be part of what's happening in Mexico right now," Ferriz de Con says, referring to the democratic moves within the country.

July's presidential election threatens to oust Mexico's 70-year-old incumbent Institutional Revolutionary Party (PRI), the longest-ruling political administration in the world. Before his death in 1997, Televisa patriarch Emilio Azcárraga Milmo, repeatedly described his company as a loyal supporter of the PRI. But since inheriting the reigns of the company Azcárraga's son, Emilio Azcárraga Jean, has made every effort to distance the company from partisan politics. The comments look to be backed up by plans for its nightly newscast, *El Noticiero*, to regularly feature some of Mexico's most-respected political commentators, such as Jorge Castaneda, who also pens political analyses for *Newsweek* magazine.

"Solórzano has managed to preserve his journalistic independence and integrity. He was behind the excellent standards at *En Blanco y Negro*," says Enrique Valesco, a professor of communications and media at Mexico's Autonomous Metropolitan University (UAM). In his opinion, Ferriz de Con is more mainstream. "His opinions have always been influenced by the powers that be," he says.

Florence Toussaint, a professor of media at the National Autonomous University of Mexico (UNAM), describes Ferriz de Con as opinionated, and one who fails to distinguish between editorializing and delivering the news. "During the recent UNAM [student] strike, Ferriz de Con would deliver the news and his opinion as if they were one and the same thing," she says. Ferriz de Con refutes the charges of journalistic tameness, and describes his Imagen team as pioneers of investigative journalism in Mexico. MVS declines to comment on the departure of the trio, only commenting in a press release that wished them well in their future career.

In any event, Ferriz and his team claim to have a following, certainly among radio listeners.

It is too early to say yet whether Imagen has helped Televisa ditch its conservative image and attract a highbrow audience to Sky. Valesco, for one, believes Imagen's team has the attributes that Televisa could use somewhere among its four broadcast networks, and not just on Sky. For now, however, the bulletins are coming across solely in the pay TV arena. ■

Taiwan,

Continued from Page 6

on foreign ownership, according to Jason Ho, a lawyer with the firm Elite & Shay, which specializes in media. Ho adds that deregulation would also aim to bring improved services to Taiwanese cable customers.

Legislation going along these lines was initiated in January 1999, with the "Cable Audio and Television Law" (CAT Law). At the same time, the Chen government is expected to loosen the cross-ownership and foreign-investment restrictions. Currently, overseas firms directly and indirectly may own no more than 50 percent of a local cable operator. Their direct stake cannot top 20 percent.

So just how deep could the changes go? Well, the government may go as far as to tackle adressability. Most cable systems today don't use addressable equipment, meaning they can't introduce tiered services that could help widen their revenue streams. That could change if the Chen administration follows through on a recent KMT decree that ordered all cable systems to be addressable by last March. Few operators made the deadline, so the Government Information Office, the agency that issued the order, is working with them on establishing timetables for doing so, according to Ho. How the new government handles this issue will help determine how it's viewed by the cable industry.

There's certainly a lot of work to do, and it's definitely not unwarranted. For starters, Taiwan's cable industry is one of Asia's most flourishing, with 78 percent penetration and revenue that's expected to reach $US1.6 billion next year, according to Elite & Shay.

But just as China views Taiwan as a renegade province, cable began there a decade ago as a bit of a renegade industry. The freewheeling business at one point boasted 600 cable operators whose business involved illegally retransmitting the country's three terrestrial channels. "Original programming" consisted of the also-illegal transmission of videotaped movies and other content for which the operators didn't have rights.

Profit margins were fat, thanks to the minimal programming costs. However, little was reinvested in the systems, and customers often were dealt poor service and were caught in the crossfire of tiffs between competing groups.

The process of legalizing the industry began in 1993, with the approval of laws to reign in the chaotic cable industry. The "Cable Television Law" forced cable-system operators to apply for licenses but left room for the big and well-connected players to bypass official procedures and leave smaller operators behind.

Only time will tell whether the Chen administration builds a new legal framework for Taiwan's cable industry. But cable cowboys there and abroad are almost surely in for a wild ride. ■

Princess,

Continued from Page 6

He's clearly expecting a lot more of her, as MTV prepares to launch three new digital channels in Germany. Zu Salm oversaw the networks' move to the new Munich facilities about half a year ago. She was also largely responsible for making sure that one big MTV gamble in Germany has actually paid off — opting against a lucrative, exclusive-carriage agreement with the powerful Deutsche Telekom A.G. systems company in favor of reaching a larger audience with an unscrambled signal.

Not only did that move attract more advertising revenue, but MTV also gained in popularity by programming more local content.

Clearly, it was local programming that had given its chief rival, VIVA, such an edge over MTV in the past. Early on, VIVA was able to build up genuine German stars, while MTV was seen as less in touch with its audience.

Zu Salm aimed to change that view by adding regional bands to the playlist and reporting on popular events in Germany. What's more, she converted the channel an almost entirely German-language format. "I don't think we are going to launch an all-English channel again in Germany," zu Salm says.

The change in programming certainly had its glitches. A three-hour program block produced in Berlin was poorly received by viewers and critics, and the channel's director of programming left after just a year and a half on the job.

Zu Salm "took some risks. But that's the nature of TV," says Hansen.

Clearly, MTV's global branding has helped pave the way for zu Salm's success, notes one German advertising executive. "The more its German competitor VIVA loses its innovative aura, the more profit MTV is able to draw from it," the exec adds.

MTV is hoping to steal some more thunder away from the competition with its three new digital channels — MTV Extra, MTV Base and VH1 Classics. All three are versions of digital services already launched on direct-to-home platform British Sky Broadcasting. Another one, M2 already has a carriage agreement with the Premiere World direct-to-home platform and is likely to debut later this year.

Launch dates for the others are more nebulous.

Exactly how those networks will affect MTV's bottom line has yet to be known. But right now, zu Salm freely says her network is "highly profitable."

That's a good reason for zu Salm's popularity among MTV's ranks. But her fans extend well beyond that, and she actually receives requests for autographs. "She seems to have become everybody's darling," says one media consultant. ■

ONE ON ONE

Brazil's Broadband Driver

JO DALLAS SPEAKS WITH MOYSÉS PLUCIENNIK

High-profile Brazilians are often referred to on first-name basis only. So if anyone in the pay TV industry there hears the name Moysés, they know the talk's about Moysés Pluciennik, who heads the telecommunications and distribution platforms of Brazil's leading media group, Organizações Globo. Pluciennik is something of a rising star within the organization, which, with the help of some powerful allies, is positioning itself at the forefront of Brazil's broadband revolution.

The partners are none other than software giant Microsoft Corp. and Banco Bradesco S.A., Brazil's largest private bank. Along with Globo, the two companies are part owners of Globo Cabo S.A., Brazil's biggest cable company. It is one of several divisions Pluciennik oversees. His command also includes NetSat, the Brazilian arm of panregional direct-to-home (DTH) satellite platform Sky Latin America. Globo is partnered in that venture with News Corp., Liberty Media International Inc. and Mexico's Grupo Televisa S.A.

It is no easy feat juggling so many aspects of the media business, especially in Brazil. The country is just emerging from a severe recession that dampened the prospects of the entire industry, despite the recent issuance of hundreds of new cable-franchise licenses. Today, there is a maelstrom ahead for Pluciennik in his new role as president of the Brazilian Association of Subscription Telecommunications (ABTA). Its annual trade show, ABTA, this year faces competition from a new industry event called TVLink. In the following edited interview, Pluciennik discusses his various ventures in his characteristically cool, unflappable manner.

DALLAS: Tell me about your areas of responsibilities.

PLUCIENNIK: Over the last 16 months, Globo has been reorganized into three major clusters of operations: media and entertainment, headed by Marluce [Dias da Silva]; a print media and radio division headed by Luiz Eduardo Vasconcelos; and my field, which is distribution and telecommunications. I have that cluster of operations, including NetSat, which is Sky; our paging operations; our cellular operations, Maxitel; and now, through Vicom S.A., our participation in private [data-transmission] networks.

DALLAS: What are the results so far of Microsoft's investment in Globo Cabo?

PLUCIENNIK: In September there was a transaction, concluded in November, in which Microsoft acquired just under 10 percent of Globo Cabo, and therefore became what we call a qualified investor. As a participant and voting member on our board, they help shape our strategies going forward, and review our results.

At the same time, Organizações Globo and Microsoft signed a cooperation agreement to explore new business opportunities. This included the idea of having a joint portal, building an [Internet-service provider], and developing future interactive-digital-TV applications based on cable. Even before then, they helped us deploy Virtua, our broadband-Internet service. In June, we are going to start a trial of Microsoft TV for interactive-digital set-top boxes, which is probably the first [trial of its kind] internationally.

DALLAS: What percentage of the plant has two-way capacity?

PLUCIENNIK: By the end of this year, it will have 100 percent [two-way] capacity.

DALLAS: What was Microsoft's role in Virtua?

PLUCIENNIK: We started working with Microsoft back at the end of 1997, beginning of 1998, and had a sort of technological-cooperation agreement. We implemented that solution in a city northwest of São Paulo. We tested the product, the integration of the cable modems with headend facilities, and the whole integration of what Microsoft calls MCIS [Microsoft Commercial Internet Service]. So the whole product is mostly based on Microsoft's software.

When we launched our Internet product we launched with four partnerships. They were Globo.com, UOL, Terra Networks S.A. and Matrix. In the next couple of weeks we'll be announcing another number of relationships, including a few that specialize in free Internet service.

DALLAS: What about your plans to bring on board a telecom partner?

PLUCIENNIK: We have been having conversations with telecom partners for the last two to three years. When the whole idea of second telephony licenses came about, it was public to the market that we had very advanced negotiations with AT&T Corp., and also BellSouth Corp. and we continue to have those conversations.

DALLAS: With the Internet, is your intention to offer a cable modem connection as well as a dial-up connection?

PLUCIENNIK: No, we don't see that as a business for Globo Cabo at this point. We want to leverage our own network as opposed to acquiring a [telecoms] network.

DALLAS: In Brazil in recent years, the DTH market has witnessed steady subscription growth, while cable has lost subscribers. Is that still a trend?

PLUCIENNIK: That trend has already changed dramatically in the last quarter of 1999 and the first quarter of 2000. [Cable] showed some respectable growth in the fourth quarter, and you'll see even greater growth in 2000. During 1999, we faced a major recession. Since the middle of 1998, we have worked heavily on containing churn and bad debt, which, fortunately, we turned around completely.

PLUCIENNIK

MOYSES PLUCIENNIK

TITLE:
CEO, Organizações Globo's telecoms and distribution unit

BACKGROUND:
Joined Organizações Globo 1996. Prior to that, founded and headed a software-development and distribution company called Softbase; was also new-ventures director for a Brazilian computer-hardware manufacturer. Holds an MBA from the Massachusetts Institute of Technology.

STATISTICS:
50 years old, married with four children, lives in São Paulo.

DALLAS What is your annual churn rate today?

PLUCIENNIK: Today it is around 12 percent. There was a point when it was 44 percent. Today we have half the average churn of a United States cable company.

DALLAS: What's the main driver of Sky in Brazil?

PLUCIENNIK: For one, all the DTH operations in Brazil are fairly new compared to cable. Cable has been in the same areas for six, seven years, and in some cases, more than that, whereas satellite was arriving to areas that have never had pay TV. Of course, [DTH] had a much emptier space in which to grow.

What you will see now is that cable is back to growth, not only because the economy has picked up, but Globo Cabo is launching something called standard selection.

This is a lower-priced programming package of around $US15 per month.

DALLAS: This package targets the "C" class?

PLUCIENNIK: Absolutely. We have been with the C class before. But in the past, the industry in general had the wrong pricing, the wrong packaging and the wrong commercial method. That created enormous churn and enormous bad debt.

Now we are coming back to that market with a better-priced product, a better-positioned product and a commercial system that will avoid, or eliminate completely, churn and bad debt, because the only way you can buy this service is through prepayment.

DALLAS: Currently, you are the president of the ABTA, whose annual trade show is competing with TVLink. Many in the industry believe that the size of the Brazilian market can't justify two shows.

PLUCIENNIK: I can't comment on other initiatives. But ABTA will only support one show, and all of ABTA's key partners, like Globo Cabo, TVA and the programmers are not going to support any other show. This year our idea is not so much to center on a show, but on a first-class seminar, or congress. ■

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